

# PUNJAB SANITARY REPORT FOR 1916.

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**REPORT**  
**ON THE**  
**SANITARY ADMINISTRATION OF THE PUNJAB**  
**AND**  
**PROCEEDINGS OF THE SANITARY BOARD**  
**FOR THE YEAR 1916**

**BY**  
**COLONEL H. HENDLEY, K.H.S., M.D., I.M.S.,**  
*Sanitary Commissioner, Punjab,*

**AND**  
**THE REPORT ON SANITARY WORKS FOR 1916**

**BY**  
**MR. A. R. ASTBURY,**  
*Sanitary Engineer, Punjab.*





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## **Section II.—European Army.**

No remarks.

## **Section III.—Native Army.**

No remarks.

## **Section IV.—Jails.**

No remarks.

## **Section VII.—Vaccination.**

(Separate report.)

## **Section VIII.—Sanitary Works, Military.**

No remarks.



(The text of the Sanitary Report is limited to 20 pages and that of the Sanitary Engineer to 4 pages.)

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READ—

The Report on the Sanitary Administration of the Punjab for year 1916.

REMARKS.—The year 1916 was on the whole a healthy one especially in the first half which was unusually dry and unfavourable to the spread of plague, cholera and other epidemic diseases. The monsoon rains were, however, heavy and prolonged, and in consequence malaria, which in 1915 had been practically absent in epidemic form, caused a high mortality in the last quarter of the year. Prices of food grains were considerably lower than in 1915.

2. The general birth-rate, 45·6 *per mille*, was 2 *per mille* above that of the previous year and ·7 in excess of the average of the preceding five years. This high rate—the highest in India during the year—has only been exceeded in two years, 1899 and 1914, since registration of births was started in the Punjab in 1878, and may be attributed partly to the absence of malaria in the previous year and partly to the freedom which the province enjoyed from plague during the year itself. The highest rate—52·7 *per mille*—was that recorded in the Ferozepore District, but in the Karnal, Rohtak, Lyallpur, Lahore, Amritsar and Montgomery Districts also the rate was over 50 *per mille* and the provincial average was surpassed in the Ludhiana, Jhang, Gurgaon, Sialkot, Gujranwala, Gurdaspur and Hissar Districts. In Montgomery the rate rose by 9 *per mille* as compared with the previous year and the increase in Multan, 8·4 *per mille*, was not far short of this. The lowest rate excluding Simla was that of the Dera Ghazi Khan District, 30·8 *per mille*, Kangra coming next with a rate of 33·5 *per mille*, a decrease of over 5 *per mille* as compared with 1915. Among large towns Amritsar had as usual the highest birth-rate, 49 *per mille*, but the greatest increase was in Multan where the rate, 48 *per mille*, was 7 in excess of the previous year's rate. Except in the districts of Simla and Kangra the birth-rate was everywhere greater than the death-rate, the excess amounting to so much as 28 and 25 *per mille* in Lyallpur and Rohtak, respectively.

3. The absence of plague during the year accounts for a considerable fall—from 36·3 to 30·7 *per mille*—in the general death-rate of the province. The highest rate, 40·3, was recorded in the Mianwali District, the lowest in Lyallpur, 23·1. In Gujrat the rate was 25 *per mille* lower than in 1915 while an improvement of about 20 *per mille* was recorded also in Rawalpindi, Jhelum, Amritsar and Jullundur. Among large towns Amritsar had the highest rate—39·94—though this was lower than the rate of the previous year: on the other hand in Lahore and Multan, though mortality was not so high as in Amritsar, the rates were in excess of those both of the previous year and of the quinquennial average. Of smaller towns Gojra with a death-rate of only 3·14 *per mille* was again the healthiest, but at the other end of the scale come the appallingly high rate of 72·58 in Mukerian and rates of over 60 *per mille* in Begowala, Karor and Kila Didar Singh. For towns as a whole the rate was 4·7 higher than that of rural areas. The figures with regard to infant mortality are not so satisfactory as those of the previous year, due chiefly to the prevalence of malaria, but mortality was not so high as in 1914. Calculated on the number of births during the year the death-rate among male infants amounted to 201·79 *per mille* and among female infants to 198·47 *per mille*. In the Simla District the corresponding rates were much in excess of the provincial average, amounting to 335 for males and 311·3 for females.

4. The total number of deaths due to cholera amounted to only 1,651 as compared with 13,196 in 1915. In four districts the disease did not appear at all and only one death from this cause was recorded in the Simla District. Among towns Panipat with 165 deaths was most severely afflicted and here the task of coping with the outbreak was aggravated by the difficulty experienced in locating the numerous wells in the town. Epidemics of moderate severity also occurred in the towns of Gujranwala and Ferozepore. In all these cases valuable services were



rendered by both officials and non-official residents and the thanks of Government are due to the gentlemen named by the Sanitary Commissioner for their public spirited services. The frequency with which cholera spreads over the Punjab from Hardwar continues to be a disquieting feature, as the sanitary arrangements there are in no way under the control of the Punjab Government. The Lieutenant-Governor has, however, recently received a report from the Sanitary Commissioner on the subject, and the suggestions therein made are under examination.

5. The province was freer from plague in the year under review than in any other year since the disease made its first appearance in the Punjab. In fact for 3 weeks in July the province was declared free of plague for the first time for 20 years and the Municipalities of Lahore and Amritsar and the districts of Simla, Multan, Muzaffargarh, Mianwali and Dera Ghazi Khan remained free throughout the year, while only imported cases occurred in Kangra, Gujrat, Jhelum, Lyallpur, Attock and Shahpur. Altogether there were only 3,325 deaths due to this cause as compared with 244,104 deaths in the previous year. The Ambala District with 1,400 deaths suffered most heavily and among towns Rawalpindi preserved its unenviable notoriety as a focus of plague infection. Four hundred and ninety-one deaths occurred in this municipality alone out of a total of 577 deaths for all the towns in the province. Special measures are obviously required to root out the disease in this place and His Honour is glad to note that after a period of apathy and indifference the Municipal Commissioners have at last awakened to a sense of their responsibilities in the matter and are co-operating with the sanitary and local authorities in their efforts to eradicate the disease. All the usual methods for combating plague were employed during the year and in addition experiments were made with Barium Carbonate as a rat poison. The new poison proved deadly to rats while innocuous to dogs, fowls and other domestic animals : the preparation of baits with this poison is simple and considerably cheaper than the stuff previously in use and Colonel Hendley and his assistant, Dr. T. Sinha, are to be congratulated on the success of their experiments.

6. Small-pox accounted for 2,886 deaths, as compared with 1,694 in the previous year. This mortality, equivalent to a death-rate of 0·15 *per mille*, though higher than in 1915 was considerably below the average of the preceding five years. The worst sufferers were small towns where the Vaccination Act is not yet in force. The number of such towns is, however, being steadily reduced.

7. The prevalence of malaria has already been remarked upon and it is to this that the high mortality from "fevers" is due—376,000 deaths were recorded under this head during the year, equivalent to a death-rate of 19·44 *per mille* as compared with 14·73 in 1915. In Mianwali the rate was so high as 32·82, in Gujranwala 30·87 and in Muzaffargarh 29·79, while in eleven other districts the provincial average rate was exceeded. In the small town of Begowala a rate of 54·41 *per mille* was recorded, and in this and other small towns such as Karor and Kila Didar Singh where the fever death-rates were 48·82 and 44·34, respectively, a malaria survey would, as the Sanitary Commissioner suggests, appear eminently desirable with a view to remedying the conditions at present so favourable to malaria.

8. The financial stringency consequent on the war caused a considerable reduction in the Government grants for sanitary improvements. A sum of Rs. 2,60,232 was distributed by the Sanitary Board in aid of various sanitary works, the principal individual grants being Rs. 90,710 for the Ambala water-supply extension scheme, Rs. 50,000 for the Jullundur drainage scheme, Rs. 50,000 for the Sargodha water-supply extension scheme, Rs. 20,500 to the society for promoting scientific knowledge, Rs. 12,645 for the Kalka drainage scheme and Rs. 7,000 for the Nurpur (Rawalpindi District) fair ground water-supply scheme. Many other schemes were approved by the Board and accorded administrative sanction or recommended to Government for such sanction, while the Sanitary Engineer and his staff were fully engaged in working out projects of drainage and other works all over the province. The post



of Sanitary Engineer was held by Mr. V. Stainton up to the 20th October 1916 and by Mr. A. R. Astbury for the rest of the year. Mr. Astbury's report and the record of the proceedings of the Sanitary Board afford ample evidence of the interest which is being taken all over the province in the improvement of urban sanitation. It is hoped that this interest will be still further stimulated if the Small Towns Bill becomes law as that measure, upon which opinions have been invited, will enable many areas outside the scope of the present Municipal Act to make simple and suitable provision for civic administration. With regard to rural sanitation there is little to notice. Progress continues to be slow and during the year the system of taxation under the District Boards Act for the maintenance of a small conservancy staff was extended to only two villages. This system is now in force in villages in a number of districts and is reported to have produced satisfactory results and His Honour would like to see more District Boards interesting themselves in the matter.

9. The office of Sanitary Commissioner was held throughout the year by Colonel Hendley and His Honour desires to acknowledge the efficiency with which he discharged the duties of the post in addition to his other onerous duties, and to thank him for an interesting report. Major W. C. H. Forster, I.M.S., as Deputy Sanitary Commissioner and Dr. Khawaja Abdurrahman as Additional Deputy Sanitary Commissioner rendered valuable services for which the thanks of Government are due to them. The Lieutenant-Governor also wishes to place on record his appreciation of the generosity of the many gentlemen whose public benefactions are noticed in the report.

ORDER.—Ordered that a copy of the foregoing remarks be circulated with the report and be furnished, with the usual number of copies of the report, to the Government of India ; also that the review be published in the *Punjab Government Gazette*.

Ordered, also, that a copy be furnished to the Sanitary Commissioner, Punjab, for information.

By order of His Honour the Lieutenant-Governor of the Punjab,

O. F. LUMSDEN,

*Financial Secretary to Government, Punjab.*



# SANITARY DEPARTMENT.

## MEMO. OF ERRATA.

In the Annual Sanitary Report of the Punjab for 1916.

1. On page 4, paragraph 15, lines 9-11, for "The total ——— upwards" read "The total female rate exceeded the male rate under every age group except in the case of infants under one year."
2. On page 9, line 29, for "convenience" read "inconvenience."
3. In paragraph 23, page 11, lines 21 to 25, for "The rate ——— females. Among ——— and 0.24" read "The rate of mortality from small-pox was greatest among children from one to five years of age being 0.70 per mille in the case of males and 0.63 in that of females. Among infants under one year of age these rates were 0.66 and 0.58 while in the age group 5-10 the rates fell to 0.25 and 0.24."
4. Insert the following against entry No. 11 (Gojra) in Statement A :—

Population supplied, No.	Water used, daily average gallons.	Daily consumption per head, in gallons.	Lift, including friction, in feet.	Daily hours of pumping: average throughout year.	Average pump: horse-power during year.	QUANTITY AND COST OF FUEL USED PER ANNUM.		Coal or oil: consumption per horse-power hour.	Cost of small stores, and establishment at pumping station.	Total cost of fuels, small stones, and establishment.	Cost of pumping, per horse-power hour.	Original level average of water surface in all the wells.	Average of water surface level below ground level of all the wells in the year 1916.
						Wood or electric current: units.	Coal: cost.						
5,500	24,800	4.5	32	3.5	1.13	...	Rs. 410	...	Crude oil 4 seers per hour.	Rs. A. P. S. 2 0 0 } Dai- E. 2 0 0 } ly.	Rs. A. P. S. 720 0 0 } Year- E. 720 0 0 } ly.	Rs. A. P. 1 0 0	Water is obtained from canal (Rajbaha).

### Printer's Errors.

5. Annual Form No. I against Dera Ghazi Khan, sub-column 4, for "27,451" read "227,451."
6. Annual Form No. III, against Ambala, sub-column 5, for "933" read "1,933."
7. Annual Form No. IV, Rohtak, against total, sub-column 26, for "289" read "8,928."
8. Annual Form No. IV, Gurgaon, against small-pox, sub-column 18, for "..." read "5."
9. Annual Form No. IV, Kangra, against Injuries, sub-column 16, for "1" read "11."
10. Annual Form No. IV, Ludhiana, against total, sub-column 21, for "431" read "421."
11. Annual Form No. IV, Lahore, against all other causes, sub-column 21, for "164" read "104."
12. Annual Form No. IV, Gurdaspur, against total, sub-column 12, for "30" read "370."
13. Annual Form No. IV, total for the province against fevers, sub-column 6, for "2,021" read "42,021."
14. Annual Form No. IV, ratio per 1,000 living for the province, against all other causes, sub-column 6, for "239" read "82.30."
15. Annual Form No. V, against Ludhiana, sub-column 12, for "15,905" read "14,905."
16. Annual Form No. V, against Lahore, sub-column 13, for "34.81" read "34.37."
17. Annual Form No. VI-A, against Hissar, sub-column 20, for "0.6" read "0.46."
18. Annual Form No. VI-B, Hoshiarpur District, against Hoshiarpur town, sub-column 15, for "..." read "9."
19. Annual Form No. VI-B, Hoshiarpur District, against Tanda-Umar town, sub-column 3, for "70.6" read "7,016."
20. Annual Form No. VI-B, Jullundur District, against Nakodar town, sub-column 27, for "39.78" read "32.78."
21. Annual Form No. VI-B, Ferozepore District, against Zira town, sub-column 24, for "0.2" read "0.23."
22. Annual Form No. VI-B, Ferozepore District, against Muktsar town, sub-column 17, for "3.8" read "303."
23. Annual Form No. VI-B, Gujranwala District, against Wazirabad town, sub-column 23, for "2.0" read "2.80."
24. Annual Form No. VI-B, Gujranwala District, against Kila Didar Singh town, sub-column 25, for "9.0" read "9.50."
25. Annual Form No. VI-B, Gujranwala District, against Shahkot town, sub-column 21, for "22.17" read "22.77."
26. Annual Form No. VI-B, Shahpur District, against Khusha town, sub-column 22, for "3.5" read "3.35."
27. Annual Form No. IX, against Lahore, sub-column 20, for "675" read "8,675."
28. Annual Form No. IX, against Amritsar, sub-columns 23 and 24, for "21.63" and "19.63" read "21.63" and "19.62."
29. Annual Form No. X, against Gujranwala, sub-column 15, for "34" read "24."
30. Annual Form No. XI, against Shahpur, sub-column 19, for "5.0" read "5.10."





## Section I.

Mr. Gilbert T. Walker, C.S.I., M.A., Sc.D., F.R.S., Director-General of Observatories, has kindly furnished the following brief summary of the chief meteorological features of the Punjab during the year 1916 :—

Chief meteorological features.

The first twenty-nine days of January were rainless except in the hills where many showers were recorded during the second week. The regular winter rains were ushered in by a storm from Persia on the last two days of the month, but amounts then received were not sufficiently heavy to compensate for the previous dryness, so that the month's total fall was much below the normal. During February there were several disturbances, but only one of these, which occurred near the end of the second week, gave rise to fairly widespread rain over the province. Weather was accordingly unusually open, particularly in the south-west, where hardly any rain fell. In March also there was only one interval of fairly general rainfall, *viz.*, from the 17th to the 19th, and the month's aggregate fall was short of the average everywhere excepting the Rawalpindi District. In April there were series of duststorms and thunderstorms, but the rainfall accompanying them was light—barely half of the small normal amount. The local storms were repeated at intervals in May and produced about the normal quantity of rainfall in the north and east Punjab and appreciably more than the average in the south-west of the province. During June there were the usual temporary incursions of damp sea winds, and the month's rainfall was up to the average in the plains as a whole and remarkably heavy in the Simla and Kangra hills.

The first advance of the monsoon occurred in the beginning of the second week in July, a week later than usual, and during the next fortnight frequent rain fell over the north and east of the province, but the current penetrated but seldom into the south-western districts. Some remarkable downpours of rain occurred in the neighbourhood of Lahore, Gurdaspur, Sialkot and Montgomery : thus 15·80 inches were recorded at Van, 13·55 inches at Pakpattan, and nearly 12 inches at Lahore, Nijabat, and Shakargarh during the interval between eight hours of the 13th and the same hour of the 15th. The fall for the whole of July exceeded the normal by 50 per cent. in the Punjab east and north and 21 per cent. in the Punjab south-west. The monsoon was unusually active in August and the whole province with the exception of the Kangra, Hoshiarpur, Jullundur, Ludhiana, and Sialkot Districts received excessive rain. In the region comprising the districts of Multan, Muzaffargarh, and Dera Ghazi Khan the month's fall was nearly four times the normal amount. In September rainfall occurred within three well-defined periods, *viz.*, from the 1st to the 4th, the 12th to the 19th, and the 24th to the 27th, and was up to the normal in the east and north Punjab, and in slight defect in the Punjab south-west. The concluding burst of the rainy season occurred between the 2nd and the 6th of October, upwards of a fortnight after the usual time. It was widespread and unusually heavy for the time of year. Dry weather set in generally during the second week and except for a few falls on December 16th held uninterruptedly up to the close of the year. In brief, the weather was less disturbed than usual from January to April, of about the normal character in May, June, and September, very wet in July, August, and the early part of October, and unusually dry during the rest of the year. The air was damper and the sky more cloudy than usual during the rainy season from June to October, while the reverse was the case in March. Conditions were fairly normal in February, April, May, and November, but in January humidity was conspicuously low and in December the cloud amount was markedly in defect. The maximum temperature was above normal by 4° in January and 6° in March and below it by 2° or 3° from May to November ; the minimum temperature was higher than usual by 4° in March and April and by 2° in October, below the average by 2° to 3° in May, November, and December, and fairly normal in the remaining months.



2. Mr. D. J. Boyd, I.C.S., Director of Land Records, Punjab, has furnished me with the usual return which shows that the average retail price of wheat was 10 seers per rupee at Ambala,  $10\frac{3}{16}$  at Lahore,  $9\frac{7}{8}$  at Rawalpindi, and  $10\frac{1}{16}$  at Multan during the year 1916. The average rates of barley were  $12\frac{3}{4}$  seers at Ambala,  $13\frac{9}{16}$  at Lahore,  $13\frac{7}{16}$  at Rawalpindi, and  $12\frac{7}{16}$  at Multan, and that of jowar  $13\frac{1}{2}$ ,  $12\frac{7}{16}$ ,  $12\frac{1}{16}$ , and  $12\frac{1}{16}$ , respectively. As regards bajra the average rates varied from  $10\frac{1}{8}$  to  $12\frac{1}{8}$  seers at the principal markets of Ambala, Lahore, Rawalpindi, and Multan, that of maize  $13\frac{5}{16}$  to  $15\frac{7}{16}$ , and that of gram  $11\frac{5}{8}$  to  $12\frac{3}{4}$  seers per rupee. There was a general fall as compared with last year in the average prices of wheat and maize which is attributed in the former case to the restriction on private exports combined with freight difficulties, etc., and, in the latter, to the good crop of 1915 with the fair prospects for the next harvest. The small rise in the price of barley is due to the poor harvest of 1916 while the fall in the prices of jowar and bajra is in sympathy with the decline in wheat and maize prices, and is also partly due to better crops of 1916.

3. The first survey on wages taken in December 1912 will stand until the next survey which will take place probably in December 1917.

### Section V.—Vital Statistics.

4. The population upon which the vital statistics ratios have been calculated for this report, are those enumerated at the census of 1911. For comparison, however, an estimated population has been prepared and a few ratios worked out to show the difference made in the ratios calculated on the two different populations. The birth rate for the province, calculated on the estimated population, amounts to 42.3 and the death rate 28.5; these rates are 3.3 and 2.2, respectively, lower than the rates, calculated on the census figures. The difference in the birth rates of individual districts varies from 0.8 in Rawalpindi to 6.6 in Lyallpur and in the death rate from 0.7 in Rawalpindi to 3.5 in Ferozepore. With the exception of Simla, in which the birth rate, according to the estimated population, was higher and the death rates equal, the rates in all the other districts calculated on the estimated population were lower than those calculated on the census figures.

5. The year 1916 like its predecessors was a healthy one except for the latter part of the year when malaria was prevalent and resulted in a total death rate from fevers in excess of those recorded in recent years. Plague accounted for a very small rate, the lowest since 1900, and cholera likewise showed a considerable reduction. Deaths from other diseases varied but slightly, except in the case of small-pox and "all other causes" which accounted for more deaths than in recent years. The birth rate is the highest recorded, with two exceptions, since the commencement of registration in the Punjab.

6. **Births.**—The number of births registered in 1916 amounted to 881,546, of which 461,540 were males and 420,006 females. The total birth rate which amounted to 45.6 per mille is 2.0 in excess of that recorded last year. The increase in the birth rate was shared by both sexes, i.e., male 23.9 and female 21.7 as against 22.8 and 20.8, respectively, in the previous year.

Compared with their quinquennial average there are 9 districts which had a lower birth rate during the year under review: these are Hissar, Kangra, Hoshiarpur, Gurdaspur, Sialkot, Gujrat, Jhelum, Rawalpindi, and Mianwali, and out of these Hissar, Kangra, Gurdaspur, Rawalpindi, and Mianwali recorded high birth rates in the previous year; thus augmenting the quinquennial figures; this decrease may be attributed to malarial effects and possibly to war conditions. The birth rate recorded in the Ambala, Simla, Kangra, Hoshiarpur, Gujrat, Shahpur, Jhelum, Rawalpindi, Attock, Mianwali, Multan, Muzaffargarh, and Dera Ghazi Khan Districts during the year under report was lower.



than that of the provincial birth rate (45·6 per mille). There were 15 districts in which the birth rate exceeded that of the province, namely, Hissar, Rohtak, Gurgaon, Karnal, Jullundur, Ludhiana, Ferozepore, Lahore, Amritsar, Gurdaspur, Sialkot, Gujranwala, Montgomery, Lyallpur, and Jhang. The birth rate this year is satisfactory and is due, no doubt, to the absence of severe epidemics of plague and malaria. It has only twice been exceeded since 1878, once in 1899 and again in 1914 when it was 48·4 and 46·3, respectively.

7. No other province recorded as high a birth rate as the Punjab during the year under report. The Central Provinces has had the highest birth rate for the last 14 years, but this year the Punjab secures this distinction, the Central Provinces coming next with a birth rate of 43·85. The rates in the other provinces were as follows:—United Provinces 43·09, Bihar and Orissa 36·6, Bombay 35·98, North-West Frontier Province, 33·84, Burma, 33·71, Madras 32·54, Bengal 31·89, and Assam 30·52.

8. The number of principal towns of the province, with a population of 10,000 or upwards, remained the same as last year, *viz*, 38. The birth rate in these amounted to 47·0 and showed an increase of 3·6 as compared with that in the previous year and 3·0 when compared with the average for the previous five years. In regard to the three largest towns Amritsar, as usual, had the highest birth rate, 49 per mille. Multan coming next with 48, while in Lahore the rate was only 40. All these towns have recorded a rate higher than that in the previous year as well as the quinquennial average. The increase is most marked in Multan where it was 7 per mille, in excess of the previous year's rate.

9. The highest birth rate was recorded in the Ferozepore District where it amounted to 52·7, Karnal came next with 52·2 and Rohtak 51·4. These rates were closely followed by those of Lyallpur 51·1, Lahore 51·0, and Montgomery 50·1. As usual the lowest rate was recorded in Simla where it amounted to 21·4, Dera Ghazi Khan, Kangra, Jhelum and Rawalpindi coming next in order with rates of 30·8, 33·5, 37·6 and 38·6, respectively.

10. The excess of births over deaths amounted to 14·9 for the whole province, but in individual districts the excess in some cases was very great, *e.g.*, 28 and 25 in Lyallpur and Rohtak, while in the others it varied from 24·6 in Montgomery to 2·4 in Mianwali. Only two districts had a death rate in excess of the birth rate, amounting to 3·0 in Simla and 1·6 in Kangra. The population of Simla is migratory and this excess calls for no special mention, as in all probability it represents deaths amongst those who proceeded to the hills to recoup after illness in the plains. In Kangra it may be ascribed to the effects of malaria.

11. **Deaths.**—The total number of deaths during 1916 was 593,670, of which 309,973 were males and 283,697 females. The resulting death rate 30·7 is 5·6 less than that for the previous year and 1·0 per mille than that of the average for the previous five years. Of this death rate 19·4 or more than half was due to fevers, 7·1 to “all other causes,” and 2·3, 0·8, 0·2, and 0·4 to respiratory diseases, dysentery and diarrhoea, small-pox, and injuries respectively. All these rates are higher than those recorded in the previous year. The decrease in the provincial death rate is due entirely to the lessened incidence of cholera and plague with recorded rates as low as 0·1 and 0·2 compared with 0·7 and 11·5, respectively, in the preceding year.

12. The highest provincial death rate was recorded in the Central Provinces 39·95, Bombay coming next with 33·32, and Bihar and Orissa 32·8, the other provinces, which have a lower rate than the Punjab, are as follows:—North-West Frontier Province 30·09, United Provinces 29·50, Assam 28·59, Bengal 27·37, Burma 23·97, and Madras 21·87.



Deaths by districts. Annual Form  
No. II.

13. The highest death rate was recorded in Mianwali 40·3; the others were as follows:—

Kangra 35·1, Muzaffargarh 34·7, Rawalpindi 33·6, Ferozepore 33·5, Ambala 32·3, Hissar 31·8, and Gujrat 30·8: all these districts as well as all the districts in the Lahore Division in which the death rates varied between 30·9 and 38·6 had rates higher than the provincial rate. Out of these only Hissar, Kangra, Mianwali, and Muzaffargarh have a death rate higher than the mean for the previous 5 years and last year's rate. The high mortality is noticeable chiefly under the head "fevers" in the Kangra, Mianwali, and Muzaffargarh Districts in which malarial fevers prevailed in an epidemic form, while the increase in Hissar, though it compares favourably with the previous year's rate, is attributed to a very marked increase in the total deaths from fevers and a consequent slight increase under the heads "dysentery and diarrhoea" and "all other causes." It is worth noting that although the rates recorded in Gujrat, Rawalpindi, Ambala, Ferozepore, and all the districts of the Lahore Division were higher than the provincial rate, yet these rates were lower than those registered in the preceding year. In the seven districts not already mentioned, *i.e.*, Rohtak, Gurgaon, Simla, Montgomery, Jhang, Multan, and Dera Ghazi Khan the rates were higher than those recorded in the previous year and the increase is ascribed to excessive mortality under the head of "fevers."

14. In considering the seasonal mortality it will be observed that the highest death rate was recorded in November when it amounted to 3·45, October 3·34, and December 3·01. These rates were followed by 2·81 in September and 2·60 in January. In the other months the rates varied from 2·09 in March and July to 2·27 in August. It will be seen that the rates were higher in the last quarter of the year, the malarial season, owing to fevers and to a less extent in January in which month the increase was due more especially to respiratory diseases. March and July were the healthiest months and were closely followed by February, April, and June.

15. The highest death rates as usual were recorded under the age group "under one year." Next to infants old people of 60 and upwards suffered most, children under 5 coming next. The lowest rates were recorded under the age groups 15 and under 20, 10 and under 15, 20 and under 30, and 5 and under 10. The death rate under one year of age is higher than the rate recorded last year and lower than that in 1914. The increase is due to the high death rates from fevers, "all other causes," respiratory diseases, dysentery and diarrhoea and small-pox. The total male rate exceeded the female rate under every age group except in the case of 20 and under 30, 30 and under 40 and 60 and upwards. The infantile mortality rate was 219·32 in the case of males and 206·12 in that of females; while calculated upon the number of births during the year the rates are 201·79 and 198·47, respectively, as against 188·02 for males and 189·17 for females in the previous year.

16. As usual the districts of Gujranwala and Attock recorded among "other classes" a higher death-rate than that of other divisions of the general population, while the districts of Montgomery, Muzaffargarh, Sialkot, Gujrat, Jhang, Dera Ghazi Khan, and Jullundur recorded very high rates under this heading ranging from 87·72 in Montgomery to 588·24 in Jullundur, the total rate for the province being 28·39. The death rates for the others were distributed as follows:—

Muhammadans 31·52, Hindus 29·62, and Indian Christians 33·02.  
All these rates are lower than last year.

17. The urban rate was 34·98 and the rural rate 30·23 as against 36·17 and 36·35, respectively, last year. The urban rate exceeded the rural rate under all the heads of mortality, except fevers, while for small-pox they were the same. In the three largest towns of the province the highest rate, as

Deaths in towns and rural circles.  
Annual Form No. VI A and B.



usual, was registered in Amritsar 39·94, but this rate was lower than that recorded last year and the quinquennial average. Lahore and Multan had rates of 36·47 and 35·21, both of which were in excess of their quinquennial average and the rates recorded in the preceding year. Among the smaller towns in the province the lowest rate was recorded again in Gojra 3·14, Sargodha coming next with 8·25, and the following in all of which the rate was below 20·0 per mille, Akalgarh (12·68), Miani in Hoshiarpur District 18·07, Khangah Dogran 18·15, Sangla 18·37, Hafizabad 18·46, Fattehabad 18·70, and Khudian 18·72. Out of these Miani, Khudian, Akalgarh, Hafizabad, Sangla, and Sargodha had rates lower than that recorded in the last year, while the rates in Fattehabad and Gojra were higher than those in the preceding year, the increase being mostly due to fevers. The highest rates were recorded in Mukerian 72·58, Begowala 67·41, Karor 67·09, Kila Didar Singh 61·09, Leiah 51·76, and Bhiwani 50·45; all these rates were higher than last year and were due principally to fevers, dysentery and diarrhoea, and other causes.

18. Compared with the previous year there has been an increase in the number of entries checked in both the birth and death registers. The actual number checked was 735,948 entries in the birth registers and 493,340 in the death registers as against 620,460 and 475,230 in the previous year. This increase is due to the fact that the services of the vaccination staff were engaged to a greater extent in checking the registers of births and deaths during the off season. The percentages of omissions discovered to number of entries checked worked out to 1·60 and 1·61 for male and female births and 0·49 and 0·57 for deaths for inspections by Divisional Inspectors; the rates for Superintendents of Vaccination and Vaccinators are 1·31 and 1·36 for male and female births and 0·59 and 0·69 for deaths. The revenue staff found omissions at the rate of 1·03 and 0·89 among births and 0·94 and 0·88 among deaths. There were 153 chaukidars fined for neglecting to report births and deaths during the year, the fines amounting to Rs. 112. In municipal towns 151 persons were fined for failing to register births and 83 to register deaths, the total fines amounting to Rs. 279. The highest number of omissions were discovered in the Gujranwala District 1,224, Gujrat coming next with 1,047 omissions and 882 in the Shahpur District. As no fines were levied in any one of these districts it is presumed that the omissions were greatly due to want of interest taken by district officials in this important section of district administration.

19. There were 93 births at railway stations outside municipal limits and 96 deaths, the corresponding figures for the previous year were 119 and 91, respectively. Of these deaths fevers accounted for 40, all other causes 24, respiratory diseases 20, injuries 5, and dysentery and diarrhoea 4. There were 2 deaths reported from small-pox. The only case of cholera was that of a man who came from an infected locality in Ferozepore to relieve the Station Master of Usmanwala for a few days and died there.

20. There were 193 births and 102 deaths registered among Europeans and Anglo-Indians during the year under report, the corresponding figures for the last year being 239 and 130, respectively; the deaths were attributed to the following diseases:—cholera 2, fever 6, dysentery and diarrhoea 8, diseases of the respiratory organs 16, injuries 5, and all other causes 65. There were no deaths from plague and small-pox.

21. There were 4,078 births registered among the non-military population of cantonments and 3,796 deaths as against 3,558 births and 3,352 deaths, respectively, in the year preceding. The deaths were classified as follows:—1,803 fevers, 1,293 all other causes, 434 respiratory diseases, 142 dysentery and diarrhoea, 47 plague, 42 cholera, and 34 injuries. Only one death was registered from small-pox.



## Section VI.—Chief Diseases.

22. **Cholera.**—After three years of severe prevalence (five to thirteen thousand deaths annually) cholera shewed itself in a milder form in most parts of the province except in the towns of Panipat, Gujranwala and Ferozepore where outbreaks accounted for 165, 83 and 79 deaths, respectively. The total number of deaths registered in all districts amounted to 1,651, yielding a ratio of 0·09 *per mille* of population or 0·59 less than the rate for the previous year and 0·21 below the quinquennial average. The district of Karnal in which 197 deaths were recorded headed the list. Sialkot followed with 186, Ferozepore 166, Gujranwala 164, Ludhiana 151, Lahore 122, Lyallpur 104, Gujrat 103 and Gurgaon 100. In Amritsar, Jullundur, Ambala and Rohtak 93, 66, 59 and 37 deaths occurred, respectively. In seven others the disease did not assume a virulent form and the number of deaths registered did not exceed 19. In the districts of Multan, Muzaffargarh and Shahpur the mortality from cholera did not exceed 6 while in Simla only one death was reported. No deaths occurred in Jhelum, Attock, Montgomery and Dera Ghazi Khan districts. Out of a total of 139 towns and 33,110 villages only 48 towns (including 11 in which one death each occurred) and 201 villages were infected as compared with 69 and 1,678, respectively, in the year preceding. Cholera was more prevalent in towns than in villages this year, and the infection was at its highest during August and September.

During the first quarter of the year the province was free from the disease except for one case in the Civil Station of Lahore, which occurred on the 13th March in the person of an Indian (male) Christian, 23 years of age. It was reported that he took unboiled milk and immediately began to feel nausea followed by vomiting and purging, he died on the third day. In April 14 deaths were reported in 5 districts. In the Hoshiarpur and Gujranwala Districts the disease was imported from Hardwar and in the city of Lahore the first case was imported from Muthra in the United Provinces. For the small outbreaks in Lahore and Muzaffargarh Districts no source of infection could be traced. In Amritsar the disease broke out in a hotel on the 20th April in the person of a male Anglo-Indian who had arrived from Patiala a few days before. There were 3 cases of which one proved fatal. The Civil Surgeon was of opinion that the outbreak was due to contaminated food or water, and that the infection was most likely imported from Hardwar. During the months of May and June the number of deaths returned were 39 and 33, respectively, and in July it rose to 183. It was in the month of August that the epidemic attained its maximum intensity and the largest number of deaths (665) were registered. In September the number of deaths fell to 576, in October the disease declined, only 140 deaths being reported. The province was declared free in the last week of October, and no deaths were recorded during the remaining two months of the year.

**AMBALA DIVISION.**—In all there were 16 deaths reported in the Hissar District as the result of infection imported from Panipat in the Karnal District. The disease remained practically confined to the Hansi Town, and although it lingered on for a couple of months it never assumed the form of a severe epidemic. Cholera made its appearance in the town of Rohtak on the 17th May. The outbreak was immediately checked by the anti-cholera measures adopted with the result that only 57 cases with 37 deaths occurred as compared with 1,004 cases and 556 deaths in the previous year. The source of infection could not be ascertained. In the Gurgaon District there were 100 deaths from cholera, and it was ascertained that the first cases reported in most places were from adjoining districts of Balandshahr, Ghaziabad, Delhi and Alwar State where the disease was prevalent at the time. The measures taken to prevent the spread of the disease met with success. Out of 410 deaths in the Ambala Division, 197 occurred in the Karnal District including 165 in the town of Panipat alone. For a month previous to the outbreak in Panipat the adjoining districts of Saharanpur, Meerut and Muzaffarnagar



were visited by an outbreak of cholera. There is frequent intercourse between the people of Panipat and Muzaffarnagar especially during the mango season when large quantities of that fruit are imported into Panipat. The first case reported was a Muhammadan boy of Mohalla Pathanan who died on the 29th July, and although on enquiry it was found that he had had no direct connection with any suspicious case yet he lived very close to a house where two persons from an infected village in the United Provinces had come and stopped a few days before. These persons while at Panipat had been taken ill with an attack of acute indigestion and had fled hastily to their homes. Three days later three more deaths occurred and thereafter cases and deaths increased until the climax was reached on the 21st of August when there were 22 deaths in one day. The epidemic then gradually subsided, and by the first week of September it had ceased. There were 294 cases with 165 deaths, but the greater number of deaths were reported in Mohalla Pathanan where the disease remained firmly seated right through the outbreak. It is of interest to note that out of the total of 165 deaths 141 were amongst Muhammadans. Ambala District was responsible for 59 deaths, one case occurred in a man suffering from cholera on his return from Hardwar to Ambala City on the 15th June. It was not reported till the morning of the 17th when enquiry was made and energetic measures taken to prevent the spread of the disease. The patient died on the night of the 17th and no other case followed. In the same month the Kharar Tahsil was also infected from Hardwar, and there seems to have been no doubt but that the outbreak which affected altogether 2 municipal towns and 15 villages and caused 125 cases with 59 deaths originated from that town. The case of cholera which ended fatally in Simla occurred at Narkanda on the 15th May and was brought in on the 19th or 20th. He was removed to the Infectious Hospital and died there on the 23rd *idem*.

**JULLUNDUR DIVISION.**—In the Kangra District there were two outbreaks of cholera with 12 deaths. An imported case from Hardwar occurred at Nurpur on the 16th June and ended fatally the day after: and another from the Bilaspur State at the village of Kasar on the bank of the River Sutlej in the further corner of the district which was followed by 11 deaths. The district of Hoshiarpur accounted for 9 deaths. The first case occurred on the 18th April, infection being imported from Hardwar; there were 4 cases and 3 deaths. The district remained free until August when the disease was again introduced from the adjoining district of Kangra. In the Jullundur District there were 135 cases with 66 deaths between 22nd June and 30th September: altogether 9 villages and 3 towns were infected. The source of infection could not be traced except in the case of Phillaur, to which town the disease was imported from Amritsar City. Ludhiana District accounted for 202 cases with 151 deaths. In all 4 municipal towns and 20 villages were infected. The first case was a Hindu boy who while suffering from the disease arrived from Hardwar at Ludhiana on the 20th June and succumbed to the disease. There were 166 deaths as compared with 2,890 in the preceding year in the Ferozepore District. The chief area attacked was the Mohalla Dhobian of the Ferozepore City in which several deaths occurred. The origin of the infection remained uncertain, but it was discovered that the father of the first case was in the habit of visiting Jullundur District frequently and it was suggested that he might have been the carrier of the disease.

**LAHORE DIVISION.**—In the Lahore District excluding the Lahore municipality 76 deaths occurred from cholera, the first case on the 5th April in the village of Barki. The Civil Surgeon of the district reports that "the case is said to have been indigenous, but this is not likely." The relatives of the deceased said that the patient took rice and afterwards bhang. No other town or village was infected till the 27th May when one more case occurred at the village of Najabat in the Kanganpur Thana in a man who recently visited Bujki in the Ferozepore District in an infected area. In June and July there was only one case and one death. In August the disease broke out again and lasted up to the first week of October. The total number of small towns and villages infected was 17, and in all 133 cases with 76 deaths occurred. There were 57 cases with 46 deaths in the Lahore Municipality.



In the district of Amritsar 93 deaths were recorded in 9 villages and one town as against a total of 782 in the previous year. The disease first appeared on the 20th April in the Cecil Hotel in the Civil Lines of Amritsar in the person of an Anglo-Indian boy and then in that of a servant of the same party which had come from Patiala. On the 17th June a Hindu male, 45 years of age, arrived from Hardwar in a moribund state at the railway station and was removed to the Infectious Hospital where he died. On the 29th June, a female child who had just returned from Hardwar with her mother was attacked and died. Her clothes were washed at a well from which the people of the Mohalla largely got their drinking water, thanks to the city being in possession of a water-supply the outbreak that followed was almost entirely confined to this Mohalla. On the 5th August a man named Labh Singh died of cholera at village Sarhal in the Tarn Taran Tahsil; as there was intercourse with Amritsar it was believed to have been introduced from that city. There were 21 cases of which 9 proved fatal. The Gurdaspur District had 18 cases with 9 deaths. The disease is stated to have been imported both from the Amritsar and Sialkot districts. In the Sialkot District 186 deaths were recorded of which 46 occurred in the Sialkot Municipality. The first case in the city was a sweeper who used to visit the Sialkot Cantonment where cholera cases had been occurring while in the district the first case was imported from Gujranwala. There can be no reasonable doubt but that the recent introduction of a water-supply saved Sialkot from a repetition of the disastrous visitation of 1913. In the Gujranwala District there were three separate outbreaks. The disease first appeared in the thanas of Kila Didar Singh and Manawala in the early part of April, infection being introduced from Hardwar, and the Hoshiarpur District, respectively. The second outbreak occurred at the end of June in the thana of Kila Didar Singh. The third outbreak was in the town of Gujranwala and was rather severe causing 129 cases with 83 deaths. The infection was introduced from Sialkot. The Additional Deputy Sanitary Commissioner was deputed to both Sialkot and Gujranwala to direct and supervise measures for the control of the disease and to give such assistance as the local authorities required.

In the Rawalpindi Division the Gujrat District, where 173 cases with 103 deaths were recorded, was most affected. The first case arrived at Lala Musa from Hardwar on the 19th June and died the next day. The next outbreak was in the town of Gujrat; a case said to be indigenous occurred in the Mohalla Balochan to the west of the town on the 21st July which proved fatal the same day. It was seen by the Civil Surgeon himself. It was reported that a few cases of diarrhoea had been noticed previously in different parts of the town. It being the month of Ramzan the man was fasting—on the evening previous to the sickness he drank a great deal of water and next morning (at *sahargahi*) he ate mash dal and became ill at noon. The house in which the patient lived was single storied, low and damp, with a katcha floor and the food appeared to have been contaminated by flies. From the end of July till the 10th October sporadic cases of cholera continued to occur in different parts of the town and altogether there were 41 cases with 27 deaths recorded. Next to Gujrat the village of Lakhanwal, which is about 12 miles away, became infected: the first case was that of a prostitute who having caught the disease at Gujrat, went to Lakhanwal on the 26th August and died there after three days' illness. At Surkhpur village the disease was imported by a Jhiwar who contracted the disease at the Sialkot Cantonment, the first three cases were of the same family. As the well from which the village people mainly obtained their drinking water was just near the house occupied by the first cases it is not difficult to understand how the disease was spread. There were 49 cases with 24 deaths. In spite of all preventive measures taken the village of Surkhpur became a centre for the diffusion of the disease and the villages of Budhan, Samthal, Thatti Bahlolpur in thana Karianwala and Santhal in thana Kharian and Saroki in thana Gujrat and the town of Jalalpur were successively infected. There were three cases of cholera in the district of Shahpur, of which 2 occurred in the town of Bhera and the third in a chak near Sargodha—all these cases were sporadic and of a doubtful nature.



In the Rawalpindi City 5 deaths occurred, 12 in a village in the Kallar Police Station and one each in village Bhadana in Gujarkhan Thana and Dadwal in the Jatli Police Station. No history as to the origin of the disease could be traced in respect to the cases occurring at Rawalpindi itself. The disease was introduced into the village of Darkali Shershah in the Kallar Thana by a Constable in the Railway Police at Rawalpindi who went to the village while suffering from the disease. An imported case from Delhi occurred in the Rawalpindi Cantonment. The disease was kept well under control in each instance. In the middle of August a few cases of cholera were imported from Dera Ismail Khan into the district of Mianwali. These started a mild epidemic in Darya Khan, a village of the Bhakkar Tahsil and a case also occurred in Kheawar village at a distance of three miles from that place. The Civil Surgeon visited the spot and took immediate steps to check the spread of the disease. Altogether 18 cases with 12 deaths occurred.

MULTAN DIVISION.—Cholera broke out in the Lyallpur District about the end of May and continued unabated till the end of September affecting 30 villages and accounting for 104 deaths against 316 in the year preceding; the source of importation remained untraced. In the Jhang District 12 deaths from cholera occurred; the first victim was an imported case from Hardwar which returned to Jhang City on the 30th April while suffering from the disease. The other 11 fatal cases had no connection with the first case and were indigenous cases. At Multan 5 cases with 4 deaths were recorded. The first case who returned from Ajmere on the 27th May fell ill the night of the next day and died on the 29th idem. The second and fifth cases were imported from Hardwar. The Muzaffargarh District returned 10 cases with 6 deaths of which 7 cases with 3 deaths occurred in the middle of April and were of doubtful origin. The necessary measures to prevent the spread of infection were promptly taken.

Mr. W. S. Hamilton, I.C.S., Deputy Commissioner of Gujranwala, at much personal sacrifice and convenience to himself, did everything possible to assist in coping with the outbreak there and Mr. Jacob at Karnal did work of a very valuable kind in fighting the very serious epidemic at Panipat. Mir Muhammad Ismail, the Assistant Surgeon, at Panipat did most excellent work both in attempting to cope with the epidemic and in treating the sick. His services on this occasion deserve high commendations. Pandit Janki Nath, Atal, Revenue Assistant, Karnal District, Lala Ganga Ram, Tahsildar, and Chaudhri Wazir Ali Khan, Zaildar, and Chaudhri Rahmat Ali, Safedposh, rendered valuable services in connection with the epidemic at Panipat. Pandit Ram Chand, Vaid of Panipat, gave much help to the people and for his services was presented with an address and a reward by some of the citizens. Good work was done by Senior Sub-Assistant Surgeon Sardar Sahib Kartar Singh, Sardar Bahadur Sardar Narain Singh, Vice-President, and Muhammad Din, a Member of the Municipal Committee, at Gujranwala. Mr. Ram Lal, Pleader of Ferozepore, placed a sum of Rs. 100 at the disposal of L. Pars Ram, a local Medical Practitioner, for the help of poor patients, and he gave the Additional Deputy Sanitary Commissioner, while on cholera duty at Ferozepore, such help as he required. Dr. K. A. Rahman, Additional Deputy Sanitary Commissioner, showed much energy and skill in dealing with these outbreaks, more especially at Panipat for which he received the commendations of the Commissioner and Deputy Commissioner.

The salient feature of the Panipat outbreak consisted in the great difficulty experienced in locating the position of the numerous wells in this town, it is one of the disadvantages of having the water level so near to the surface that the sinking of a private well is within the means of a large number of house owners. This was further complicated by people misleading the authorities by pointing out wells for disinfection that contained brackish water and were not used for drinking purposes and concealing those that were. The wells were at first disinfected with lime, and as the disease still continued the authorities having obtained a sufficient supply of Permanganate of Potash used that instead, and as the outbreaks rapidly abated from then onwards it appeared to those engaged in the work that the lime had failed; this however



does not follow in view of the fact already referred to that it was not till late in the epidemic that a satisfactory list of wells was made, and probably the most important, from the cholera point of view, disinfected. It would appear from the experience obtained here to be most important that a complete list, revised annually, of all wells, public and private, should be kept in the municipal office. We cannot, however, hope that Panipat will avoid the risk of such outbreaks until its streets have been efficiently drained and it has been given a piped water-supply. The high price of Potassium Permanganate and the difficulty in obtaining it, besides the objection there is to using it when so urgently required for war purposes, has necessitated using substitutes—lime, if fresh and properly used as was shown in other outbreaks in which it was used in the year under report, is such a one, but it has the disadvantage of being bulky and that it may fail under special conditions; another is bleaching powder which is so very extensively used and most successfully so to disinfect water supplies in France and Mesopotamia—this has the disadvantage of deteriorating very quickly if exposed to the air; it is, however, cheap, a very small quantity is necessary to sterilise a large quantity of water, it is colourless and in the quantities used makes little difference to its palatability. A circular letter has recently been issued in this connection showing the value of the different methods for disinfecting wells and giving particulars for their use, and I am considering the question of arranging for the supply of fresh bleaching powder in a central dépôt. I might add too that steps have been taken to obtain information as to the available supplies of Potassium Permanganate in the Province.

The outstanding feature of the Amritsar outbreak has an important bearing on our pipe water supplies: it is generally the case that water on the score of expense is not laid on to mohallas but is only available in the main streets and bazaars. This is markedly the case at Amritsar, it has the unfortunate result of giving the mohalla wells undue advantage as against the water supply, a very important factor in local outbreaks of cholera. Though this outbreak illustrates this aspect, it illustrates too—the disease being virtually confined to the distribution area of one well—as the Sialkot epidemic did on a large scale, the great benefits a town obtains from a regular water-supply; it supplies also a strong argument in favour of a continuous as against an interrupted supply in places where water from wells is always available.

The fact that so much of our cholera spreads from Hardwar has not been lost sight of, it is receiving attention.

**23. Small-pox.**—The total mortality registered in 1916 from small-pox was 2,886, equivalent to a death rate of 0·15 per mille, which though 0·66 lower than the mean ratio during the preceding quinquennium was 0·06 more than the rate for the previous year. This excess is possibly, to some extent, due to misclassification as measles (*choti mata*) was very prevalent during the year and many deaths from this cause may have been registered under the head of *bari mata* (small-pox) owing to the ignorance of the people or incorrect diagnosis. This mistake was found to have occurred in the town of Ludhiana by the Civil Surgeon and the returns were corrected. From the month of January when 98 deaths were registered, the disease commenced to increase and the number of deaths rose to 130 in February and 296 in March. During the month of April 496 deaths were recorded and in May the disease attained its maximum intensity and 515 deaths were reported, but after this on the approach of the hot weather there was a decrease in the number of deaths and only 473 were registered in June. From that month onwards the number of deaths declined considerably, and in July and August 328 and 186, respectively, were reported while in September and October there was a still further reduction to 141 and 123. The months of November and December were exceptional as only 49 and 51 deaths were registered, and it may be noted that these figures are the lowest on record for any one month since 1867. The highest death rate from small-pox was recorded in the Lahore district being 0·61 per mille. The districts of Amritsar, Ferozepore, Montgomery, Multan, Muzaffargarh, Lyallpur and Mianwali

Annual Form No. VIII.



came next with rates varying from 0·37 to 0·18. These rates except in the case of Ferozepore were higher than those for the previous year, but in all cases much below the preceding quinquennial average. The rate recorded in the Ferozepore district was 0·06 below the rate for the previous year. In the Simla district not a single death from this cause was reported and in the remaining 19 districts of the province the death rate varied between 0·11 and 0·01, these low rates call for no comment. The average death rate (0·15) from small-pox was the same for towns as for rural circles this year, but for towns in which the compulsory Vaccination Act is in force it was 0·14 as compared with 0·18 for those to which the provisions of the Act have not been extended. Among the largest towns of the province Amritsar headed the list with a death rate of 0·45, Multan and Lahore coming next with 0·07 and 0·06, the corresponding figures for the previous year were 0·21, 0·38 and 0·03, respectively. In the smaller towns the highest death rates were recorded at Khangarh, Alipur, Nakodar and Batala, and these were, respectively, 2·69, 1·51, 1·47 and 1·10. The provisions of the Vaccination Act have not been extended to any of these except Alipur where the number of deaths was only 5, the excess in death rate here is more apparent than real due to its being calculated on a very small population. In 19 towns only one death in each was reported and in 85 others not a single death occurred while in the remaining 28 towns the death rate varied between 1·00 in Khudian and 0·04 in Rawalpindi. The rate of mortality from small-pox was, as noticed in previous years, greatest among infants under one year of age being 0·66 per mille in the case of males and 0·58 in that of females. Among children from one to five years of age these rates were 0·70 and 0·68, while in the next five years period the rate fell to 0·25 and 0·24. In the age group 10—15 it fell to 0·05 and 0·08 and in all the remaining age periods the rate was never above 0·06 per mille in either sex while it was as low as 0·001 in the case of females above 60. The female rate was lower than the male rate under every age group except in the two periods of 10—15 and 15—20, this increase is possibly the result of the difficulty with which the parents or guardians of girls of this age can be persuaded to submit them to re-vaccination.

24. **Plague.**—The following plague report has been furnished by the Inspector-General of Civil Hospitals, Punjab.

There were altogether 4,151 deaths in the Punjab from plague in the year under report—3,325 in British districts and 826 in Native States. This is the mildest epidemic we have experienced in this Province since the disease made its first appearance. Indeed, it was the first time in the history of plague that the whole of the Province was free at one time...this happened in July for a period of three weeks. One reason for this mildness may be the smallness of the legacy of infected areas left over from the previous year, as Hissar, Ambala, Gurdaspur and Rawalpindi were the only four districts which remained over from the epidemic of 1915-16.

Hissar, Karnal, Ambala, Gurdaspur and Rawalpindi were the only districts which had experience of the disease in the true epidemic form, accounting for as many as 2,800 deaths; of these Ambala and Rawalpindi were the most severely infected. There were 12 districts scattered all over the Province where the disease appeared only in sporadic form. Of the municipalities of Lahore and Amritsar and the districts of Simla, Multan, Muzaffargarh, Mianwali, Dera Ghazi Khan, Kangra, Gujrat, Jhelum, Lyallpur and Attock, the first seven were entirely plague free and the last five had only imported cases. Shahpur may also be put in this category as there were only two deaths in May and they were not positively diagnosed. An interesting point epidemiologically is that those districts which had a legacy from the previous year were the worst infected this year.

There was the usual rise in March and April, but Rawalpindi differed by showing a rise in October and November. In spite of the abnormal rainfall there were only three districts, *viz.*, Ambala, Ludhiana and Gurdaspur, in addition to Rawalpindi, which were infected at the end of the year.



Besides instruction afforded to the people by the special and the local medical staff and by Civil Surgeons, verbally as well as by means of Lady O'Dwyer's appeal to the women, on the principles of prevention of disease and protection from it, the value of solar disinfection and of dessication by burning dried cowdung cakes and Nim leaves was also insisted upon.

In the infected villages during active infection and in the late infected villages during the off season, ratting has been carried out by means of trapping, baiting and smoking as satisfactorily as was possible with the very meagre staff available. In Rawalpindi work on proper lines was again delayed owing to the indifference of the Committee in the beginning and later on by the delay in getting new traps in good time, due to shortage of material. Then the passive resistance of the people was a great factor against all sound work, and there was hardly any change for the better, in spite of the great interest taken in the matter by the Commissioner, Lieutenant-Colonel F. Popham Young, C.I.E., who addressed a mass meeting of the citizens on the subject and called for volunteers to help the special medical staff in checking the disease. The epidemic in the city starts generally in or around the grain market, and from enquiries made by my Assistant it appears that the Mandi imports a huge quantity of grain which is stored up in the godowns for practically 9 months in the year. This accounts for the persistence of the infection there during the quiescent period (owing to the large rat population) as also for the variation in the mortality curve, as there is a complete and violent epidemic here before the weather and temperature provide the most favourable conditions for an outbreak, *viz.*, in October and November. Unless the grain godowns are made rat proof the danger will always remain. This year there was no Health Officer, and the sanitary condition of the city was anything but satisfactory.

Besides, measures aimed at reducing the rat population, cresol fumigation—to destroy fleas—evacuation and inoculation have all been practised with some success. Evacuation accompanied as it so frequently is by panic flight is to be deprecated—inoculation however cannot be too strongly insisted upon as a means of protecting threatened populations and the number of injections given—19,886—during a light season may be considered satisfactory.

The reporting of cases is appreciably better, as defaulters are generally dealt with severely by district authorities and the 17,369 persons treated by the small staff we had this year shows that people are becoming well disposed towards our treatment.

During the first half of the year there was a sufficient number of Assistant Surgeons on plague work, but during the latter half the number dwindled off rapidly, due to many getting temporary commissions and many being transferred to the General Branch. So much was this the case that in September I obtained the sanction of the Local Government for the employment of Sanitary Inspectors and other suitable men to act as Plague Supervisors. The district vaccination staff were employed on plague work during July and August in almost all districts to carry on the usual precautionary hot weather campaign under the supervision of the nearest local medical men and the Civil Surgeons. My Assistant, Dr. T. Sinha, made a tour of Gurdaspur, Ferozepore, Hissar and Ambala Districts during the period of active infection, and was in Rawalpindi from July to the end of the year. At this latter place, besides advising the municipality and supervising the ratting campaign, he also did some work in the Cantonment where plague had broken out in one of the cavalry regiments in a violent form. While there he also carried out experiments with Barium Carbonate, a new rat poison. He has given a detailed report of his experiments and results, which has been submitted separately to the Government. I inspected Rawalpindi in connection with plague in the month of November and sent in a special report on the conditions prevailing there to the Local Government which is still under consideration.

Dr. Sinha gave me complete satisfaction as my Assistant in the Plague Department during the year. He has spent most of his time visiting plague-stricken areas and in giving advice and assistance to local authorities. At



Rawalpindi he gave very valuable assistance to the Military authorities, which were acknowledged, and more recently at Ambala his services have been much appreciated.

5. **Fevers.**—There were 376,003 deaths recorded under the head of fevers during the year under report, this shows an increase of 91,219 deaths as compared with the previous year when the mortality amounted to 284,784. The fever rate works out at 19·44 per mille of population as compared with 14·73 in the preceding year and 15·79 for the quinquennial. The largest number of deaths was recorded in the months of November, October and December, *viz.*, 47,820, 45,116 and 40,529, respectively, as against 25,047, 20,639 and 33,201 in the corresponding months of the previous year, the increase being due entirely to the effects of malaria. The fever death rate in all the districts in the province was higher than that recorded in the previous year and the following 14 districts had a rate higher than the present provincial rate—Mianwali 32·82, Gujranwala 30·87, Muzaffargarh 29·79, Multan 22·59, Kangra 22·40, Dera Ghazi Khan 21·99, Rawalpindi 21·18, Attock 20·99, Sialkot 20·89, Hissar 20·06, Gujrat 19·91, Jhelum 19·83, Hoshiarpur 19·66 and Amritsar 19·62. The increase in the fever death rate recorded in these districts was due to malaria which broke out in an epidemic form in the last quarter of the year owing to a high rainfall in the monsoon season. In Gujranwala the riverain and canal tracts particularly about the Palkhu Nallah and in the Shahpur District the riverain tracts of the Jhelum suffered most, on account of flooding.

26. The urban and rural death rates from fevers were 14·87 and 19·90 compared with 13·32 and 14·87 in the previous year and 14·48 and 15·99, the quinquennial average. Fevers in municipal towns and rural circles. Annual Form No. VI A and B. The three largest towns in the Punjab, Lahore, Multan and Amritsar, recorded rates of 21·13, 15·78 and 13·57 as against 18·59, 15·38 and 15·59 in the previous year and 17·24, 15·67 and 16·22, the average for the previous five years; it will be observed that in Amritsar the death rate was considerably below while in Lahore and Multan it was above the quinquennial average. In the case of smaller towns rates as high as 54·41 were recorded in Begowala, 48·82 in Karor, 44·34 in Kila Didar Singh, 36·01 in Bhakkar, 28·01 in Miani (Shahpur District), 27·17 in Khangarh and 25·45 in Leiah. The town of Begowala, with a population of 3,768 only, recorded no less than 205 deaths exclusively from fever while not a single death was registered under heads of cholera, small-pox and plague: it seems more than probable that some deaths due to other causes were wrongly classified and recorded under the head of fevers. The death rate was 38·75 in excess of that in the preceding year and the increase in mortality from fevers was most marked in the last four months of the year (September to December). This alarming increase in such a small town is worthy of investigation, and it is possible that, if a malaria survey were carried out, measures might be devised to diminish this very high death rate in the future.

27. The highest death rates were recorded among infants under one year of age, the rates being 108·97 and 103·90 among males and females, respectively; old people above sixty and children between 1 and 5 coming next with rates of 52·03 and 56·15 and 46·40 and 49·71 in the case of males and females, respectively. In the remaining groups the rate did not exceed 17·93 while the lowest recorded was 4·51. Compared with the previous year every age group recorded a higher rate except those of 10 and under 15, 15 and under 20 and males in the group of 20 and under 30. In Simla a great increase in fevers of the enteric group during 1916 requires special notice. The total number of cases notified was 35 Europeans and 8 Indians. The last-named figure does not probably represent the true incidence amongst the Indian population. Of the 35 Europeans attacked 23 were returned as enteric fever and 12 as paratyphoid(a). The first cases occurred in Faleti's Cecil Hotel in Simla during the months of March, April and May. There were eight cases, all confined to one block, occurring one after another and in two instances husband and wife were attacked. Though the presence of a possible

Deaths according to classified age periods.  
Annual Form No. IV.



carrier suggested itself a searching enquiry failed to discover one. During July and August 5 cases were reported from the Grand Hotel and here again there was no apparent cause. There was nothing significant in connection with the distribution of the remaining cases, which were scattered about the station, as showing a common origin. In Multan City 43 deaths from enteric fever were reported. It was reported by the Civil Surgeon of Hissar that typhoid fever was very prevalent in his district, and that he believed this to be due partly to adulteration of milk with water and partly to the fact that the water in diggis and johars is used for drinking and washing purposes by both human beings and cattle.

**28. Dysentery and Diarrhœa.**—There were 15,551 deaths from dysentery and diarrhœa accounting for a rate of 0·80 per mille, the corresponding rate for the previous year and the quinquennial average being 0·65 and 0·60, respectively. As usual Rawalpindi accounted for the highest death rate 3·86 while the lowest rate 0·05 was recorded in Hoshiarpur. Rates as high as 2·41 were recorded in Gurdaspur, 1·70 in Sialkot, 1·63 in Simla and 1·27 in Kangra; in the other districts it varied from 0·10 to 0·96. The urban rate was 2·29 compared with 1·91 for the previous year, and the rural rates 0·66 and 0·52, respectively. There has been a marked increase in the death rate in Murree since the introduction of the water-supply and drainage, *viz.*, 2·3 against 0·9 for the quinquennial period preceding the introduction of water-supply and the explanation furnished for this increase is (1) that the pipe water runs short when the monsoon is either late or deficient, and it becomes necessary to cut it off at the hydrants for the greater part of the day. Whenever this occurs, people resort to such of the old springs as may be running (some a mere trickle); (2) the adulteration of milk with water by *Gualas* from old disused springs and even depressions in nullahs. Several cases of adulterated milk were dealt with during the year and the offenders punished.

**29. Respiratory diseases.**—The total number of deaths due to diseases of the respiratory organs amounted to 50,009 at a rate of 2·59 per mille. This rate is in excess of the average for the previous 5 years 2·30 and last year 2·44. As usual Gurdaspur returned a rate of 10·93 the highest recorded in the province, Ambala coming next with 6·16, Sialkot 4·92, Simla 4·75 and Amritsar 4·11. Multan as usual returned the lowest rate 0·14. The rates in the remaining districts varied between 0·31 in Montgomery and 3·88 in Kangra. The rural rate amounted to 2·30 as against 5·47, the urban rate.

**30. Injuries.**—Injuries accounted for 7,175 deaths at a rate of 0·37 per mille which was nearly the same as the corresponding rate for the previous year, the quinquennial being 0·36. Of this number 326 (150 males and 176 females) were due to suicide, 515 (370 males and 145 females) to wounds, 5,126 (2,968 and 2,158) to accidents, 1,013 to snake-bite, 84 to injuries inflicted by wild beasts and 111 to rabies. The number of deaths from rabies has increased since 1914 particularly in the districts of Ambala, Ferozepore, Ludhiana and Hoshiarpur. This excess is deplorable inasmuch as it is no doubt that much of it might be avoided if the people bitten could be induced to proceed more largely to Kasauli for treatment.

**31. All other causes.**—137,117 deaths were recorded under the head "All other causes" at a rate of 7·1 per mille. This rate is in excess of the average for the previous five years 6·4 and last year 5·9. The highest death rate under this head was recorded in Ferozepore 12·5, Ludhiana coming next with 11·6 and Gurgaon with 11·0. The lowest rate as usual 2·0 was recorded in Gurdaspur, and the following districts also returned low rates, Dera Ghazi Khan 3·3, Muzaffargarh 3·6, Rawalpindi 4·0, while in the others it varied between 5·4 in Hoshiarpur and 9·6 in Karnal.

**32. Rabies.**—From the Punjab 1,151 patients underwent anti-rabic treatment at the Pasteur Institute of India at Kasauli during the year as compared with 1,136 in the previous year. Out of this number 70 were



Europeans and 1,081 Indians. There were 7 deaths and 5 failures all among Indians. The number of cases who were advised that treatment was not necessary was 127. The total number of patients treated at the Institute amounted to 5,364 as against 5,050 in the year preceding.

### Section IX.—Sanitary Works.

33. The Report on Sanitary Works during 1916 furnished by the Sanitary Engineer to Government, Punjab, is contained in Appendix B to this report.

34. It is reported that village sanitary note-books have been introduced into the Ludhiana district and are in use in all the villages of that district. Only 50 villages in Montgomery, 8 in Multan and 14 in the Hoshiarpur districts were supplied with these books during the year under report.

35. As usual a sum of Rs. 500 was provided in the budget of the Gurgaon District and the amount of Rs. 300 was sanctioned by the District Board, Hissar, for giving rewards for improvements in village sanitation, but as no noticeable improvement was effected no rewards were earned by any village community.

36. During the year 7,640 wells were cleaned and 1,316 parapets constructed at a total cost of Rs. 43,672. This shows a great decrease in the amount spent as well as in the number of wells and parapets constructed as compared with the previous year. As regards rural areas private individuals in Rohtak and Gohana tahsils had 3 wells cleaned and parapets constructed at a cost of Rs. 635, and in the Sialkot District several drinking wells were cleaned by the people themselves.

37. The income derived from the sale of street sweepings in municipal towns during the year under report amounted to Rs. 1,40,854 as against Rs. 1,28,286 realized in the previous year. The largest sums were realized in Amritsar, Lahore and Sialkot.

38. There were 1,326.57 acres of land under sewage irrigation in the principal towns and Rs. 36,597 were realized for its use. There was a decrease of 516.03 acres of land irrigated, but an increase of Rs. 2,941 in the amount realized.

39. Although attempts have been made to improve village sanitation yet there is but little real improvement; sites near villages are invariably in a filthy condition, manure and dung heaps are stacked in the vicinity of dwelling houses and drinking wells. Where cholera or plague breaks out or there is a visit paid by a touring officer the sanitary condition is considerably improved for the time being but afterwards villages readily revert to their normal condition. It is gratifying to note that in some districts rules for the improvement of village sanitation are being framed and panchayats appointed to see that they are observed and that the inhabitants of some villages, specially in the Ambala, Sialkot and Jhang districts, have contributed towards rural area sanitary schemes. In 16 villages in the Gurdaspur district, the people employ at their own expense a conservancy establishment to keep their streets clean.

A scheme for the sanitary improvement of some of the larger villages was started by the District Board, Karnal, in 1914, in pursuance of which sweepers were entertained in 7 villages for keeping clean the village *aōadi* and its surroundings, half the cost of their maintenance was to be borne by the village and the other half by the district board. This scheme, it has now been reported, is working satisfactorily and the sanitation is said to have improved.

40. During 1915-16 the total number of municipalities in this province was 100. The total income during the year, excluding the opening balance of Rs. 36,33,252 and "Extraordinary" and debts amounting to Rs. 5,5,4076 was



Rs. 63,26,910 and the total municipal expenditure on sanitation during the year amounts to Rs. 26,88,000 as detailed below—

	Rs.
(1) Water-supply ... ..	6,45,226
(2) Drainage ... ..	4,46,837
(3) Conservancy including establishment, road water- ing, latrines, etc.	8,42,344
(4) Health Officer and Sanitary Inspectors ...	56,279
(5) Vaccination ... ..	20,285
(6) Markets and slaughter-houses ...	49,846
(7) Roads ... ..	5,60,889
(8) Burning and burial of paupers ...	4,697
(9) Other sanitary requirements ...	61,597

The total income of district boards excluding opening balance amounts to Rs. 74,56,596 and the expenditure on sanitation and vaccination during the year to Rs. 1,54,156.

The information regarding grants made for sanitary works is given in Appendix A appended to this report.

41. A list of works of public utility constructed during the year 1915-16 by private individuals at their own expense is given below : —

WORKS OF PUBLIC UTILITY BY PRIVATE INDIVIDUALS.

AMBALA DIVISION.—*Ambala District*.—A pucca well at a cost of Rs. 600 by Buja, son of Pat Ram, Rajput, of Majri. A pucca well and a house at Maruali Kalan at a cost of Rs. 800 by Telu Mam, son of Ghanaiya Mal, Sud, of Marauli Kalan. *Rohtak District*.—A pucca well at Gorar at a cost of Rs. 1,000 by Lala Ramji Lal, son of Jai Lal, Mahajan, of Gorar. A pucca well at Gorar on Farmana Gorar Road at a cost of Rs. 800 by Lala Shibba, son of Sada Sukh, Mahajan, Gorar. A dharamsala and a well at Sampla at a cost of Rs. 400 by Lala Rattan Lal, son of Ajmer Singh, Mahajan of Gohana. A pucca well at Garhi Brahmanan at a cost of Rs. 400 by Pandit Hardit Singh, son of Muni Lal, Brahman of Garhi Brahmanan. A dharamsala and a pucca ghat at Sikandarpur Majra at a cost of Rs. 2,100 by Hardewa, Biramchari, of Sikandarpur Majra. Two pucca wells at Aunli at a cost of Rs. 2,300 by Udmi, son of Jita, Jat, of Aunli. A dharamsala and a pucca ghat at Aunli at a cost of Rs. 1,100 by Lala Ratti Ram, Mahajan of Aunli. A pucca well at Baraudah at a cost of Rs. 700 by Harnam Nath, Fakir of Baraudah. A pucca well at Kathura on Gohana Mehm Road at a cost of Rs. 1,000 by Siola, son of Data Ram, Jat, of Kathura. A dharamsala and a pucca ghat at Baraudah on Butana Garhwal Road at a cost of Rs. 2,000 by Lala Badlu, son of Rama, Mahajan, of Baraudah. A dharamsala and a pucca ghat at Isapur Kheri at a cost of Rs. 1,400 by Lala Kahna, son of Matu, Mahajan of Isapur Kheri. A pucca well on Mahmudpur Khandrai Road at a cost of Rs. 500 by Sheo Singh, son of Hardhan, Jat, of Mahmudpur. *Gurgaon District*.—A dharamsala with a piao and well at Palwal at a cost of Rs. 600 by Pema, son of Giasi, Chittar, son of Ghasita, and Kure, son of Harnam, malis, of Palwal. A piao with two shops in Pukhta Serai at Palwal at a cost of Rs. 300 by Dhani Ram, Saudagar Mal, Hira Lal, Shib Charan, Brij Lal, and Mohan Lal, sons of Bhola Nath, Mahajan, of Palwal, in equal shares. A dharamsala and piao at Pirthala at a cost of Rs. 1,600 by Mussammat Majo, widow of Sarup Singh, Jat of Pirthala. A dharm'sala, piao, and pucca well on Hodal Punhana Road at a cost of Rs. 1,000 by Ghunsham, son of Indar, Lambardar of Hodal. A dharm'sala, piao, and pucca well on Hodal Gudhrana-Kacha Road at a cost of Rs. 600 by Chiranji, son of Chhaju, Mahajan, of Hodal. *Karnal District*.—One pucca well and one room for travellers near the boundary of Pingli and Ghogripur villages at a cost of Rs. 300 by Joti, son of Net Ram, Jat, of Kheri Naru. One pucca well and one room on Panipat-Safidon Road at a cost of Rs. 400 by Girdhari Lal, son of Nand Lal, Mahajan of Panipat.

JULLUNDUR DIVISION.—*Kangra District*.—A pucca well in Tika Sadriyal, Tappa Bhunpal, at a cost of Rs. 600 by Chaudhri, son of Pandit Ganesha, Brahman of Bhunpal Tahsil Hamirpur. *Hoshiarpur District*.—A pucca well at village Dhatwar, Tahsil Una, at a cost of Rs. 1,600 by Mussammat Ramkor, widow of Guranditta, Khatri of Chaunki, Tahsil Hamirpur, Kangra District. A pucca well with pucca musafarkhana at Lamin on Dasuya-Mukerian Road at a cost of Rs. 900 by Dewan Chand, son of Mehta Ram, Petition-writer, of Dasuya. A pucca well at village Saloh at a cost of Rs. 550 by Mussammat Kahen Devi, widow of Dul, Rajput of Saloh, Tahsil Una. A pucca well at Dala at a cost of Rs. 200 by Davia, son of Nihala, Saini of Tanda. *Jullundur District*.—A well in the village Mussani, at a cost of Rs. 325 by Baggoo Ram, Khatri of Apra. A well on the path to Jagatpur at a cost of Rs. 250 by Munshi, son of Achhru, Jat of Lider Kalan, Tahsil Nawashahr. A well in village Mukandpur on the way to Hakempur at a cost of Rs. 295 by Devi Ditta, son of phamir Kahar of Mukandpur, Tahsil Nawashahr. A small well also a kotha in village Hoppowal at a cost of Rs. 200 by Nama, son of Santa, Jat of Hoppowal, Tahsil Nawashahr.



*Ferozepore District.*—One well at Samadh Bhai at a cost of Rs. 450 by Baggu Mal, son of Dewa Mal, Bania, and the other at a cost of Rs. 300 by Nand Singh and Rulia Singh, sons of Buta Singh, of Samadh Bhai, Tahsil Moga. A well at Dandhar at a cost of Rs. 100 by Mussammat Partapi, widow of Mal Singh, Jat of Dandhar Tahsil Moga. A well in the compound of Buttar School at a cost of Rs. 800 by S. Harcharn Singh, son of Khazan Singh, of Buttar, Tahsil Moga. A well at Chotia Kalan at a cost of Rs. 50 by Jawala Mal, son of Dunni Mal, Bania, of Chotia Kalan, Tahsil Moga. A well at Singhanwala at a cost of Rs. 150 by Nehal Singh, son of Dewa Singh, of Singhanwala. A well at Zira at a cost of Rs. 100 by Mauja, son of Karam Din, Barber, of Zira. A well at Lohara at a cost of Rs. 120 by Bhai Jita Singh, son of Jaimal Singh, of Lohara. A well at Tilanwali at a cost of Rs. 1,400 by Seth Chanan Mal, son of Chauth Mal, of Fazilka.

**LAHORE DIVISION.**—*Lahore District.*—A serai at Kasur near Railway Station for use of travellers free of charge at a cost of Rs. 10,000 by Lala Ghaki Shah, son of Saudagar Mal, and Radha Kishen, son of Ghaki Shah, Arora, of Kasur. A school building at Worsleyganj, transferred free of charge to the District Board, Lahore, at a cost of Rs. 1,000 by Khan Bahadur Haji Nur Burhan, son of Mian Ahmad Din, and Mian Muhammad Ali, Zaildar, son of Haji Nur Muhammad, of Gunja Kalan, Tahsil Chunian. A drinking well and a kotha near Nawankot on Lahore-Multan Road at a cost of Rs. 1,400 by Bishen Das and Pritam Das, sons of Moti Ram, Arora, resident of Nawankot, at present at Lahore. A chhabil in the Lahore katchery compound for supply of water and shelter to all communities at a cost of Rs. 3,122 by Lala Narsing Das, son of Lala Nihal Chand, of Lahore. *Gujranwala District.*—A primary school building at Khanke at a cost of Rs. 3,500 by Bhai Baisakha Singh, Contractor Irrigation Department, Khanke.

**RAWALPINDI DIVISION.**—*Gujrat District.*—Sinking of a well for drinking purposes by the public near the Railway Station Pindi Bahauddin at a cost of Rs. 800 by Sohna Mal of Pindi Bahauddin. *Shahpur District.*—Construction of a pucca drinking well at Sargodha for the comfort of the general public at a cost of Rs. 2,500 by Lala Sita Ram, son of Lala Kesho Das, Khatri, of Sargodha. Construction of a drinking well at Hadali at a cost of Rs. 1,341 by Honorary Captain Nawab Muhammad Malik Mubariz Khan, Tiwana, of Jihanabad. *Rawalpindi District.*—A well at Bagham at a cost of Rs. 323 by Dullah.

**MULTAN DIVISION.**—*Lyallpur District.*—A well at a cost of Rs. 500 in Chak No. 266 R. B., Lyallpur Tahsil, by Fakhr-ud-Din, son of Karim Ullah, Khoja (Chak No. 266 R. B.). A well at a cost of Rs. 500 in Chak No. 266 R. B., Lyallpur Tahsil, by Natha Singh, son of Makhan Singh, of Chak No. 266 R. B. *Multan District.*—A well at Lasuri, Shujabad Tahsil, at a cost of Rs. 200 by Jindan Shah, son of Saifullah, Sayad, of Lasuri. A well at a cost of Rs. 350 by Bahadur, son of Bahawal, of Mari Sahu, Kabirwala Tahsil.

## Section X.

42. I held the post of the Sanitary Commissioner throughout the year, in addition to that of Inspector-General of Civil Hospitals. The post of Deputy Sanitary Commissioner was held throughout the year by Major W. H. C. Forster, I. M. S., in addition to his duties of Professor of Pathology at the Lahore Medical College. Dr. Khawaja Abdul Rahman, M.B. Ch.B. (Edin.), D.P.H. (London), held charge of the appointment of Additional Deputy Sanitary Commissioner throughout the year.

43. In January I inspected Amritsar, Batala and Gurdaspur, in March Montgomery, Multan, Muzaffargarh and Dera Ghazi Khan and in April Simla and the King Edward Memorial at Dharmpur. While on my way back from Simla in April I received orders to return and assume charge of the office of Director-General, Indian Medical Service, and was so unable to do any touring till August. I then came down and inspected Amritsar, Sargodha, Jullundur, Hoshiarpur and Karnal and in September made the second sanitary inspection of Simla. In October I inspected the sanitation of the Hindustan-Tibet Road as far as Tanadhar and in November Ludhiana, Campbellpur, Rawalpindi and Jhelum and in December Lyallpur, Jhang and Sialkot.

44. During the cold weather Major W. H. C. Forster, I.M.S., was not able to undertake any inspection. During the Medical College vacation he toured through the Simla and Kangra districts for the purpose of inspecting vaccination, registration of births and deaths, sanitation of wayside



rest-houses, and for determining the nature of the outbreak of cholera which had occurred in Lahaul and Spiti during the last autumn. He reported that medical relief in Lahaul is confined to missionary effort. The Moravian Mission, which does not include any qualified Medical Officer, receives a grant of Rs. 100 for this purpose. During the year under review this grant was withheld, so that no medical relief whatever has been arranged for. He inspected 50 villages in Rampur Bashahr, Kumharsain, Keonthal, and Koti Kiar States in Simla district and 43 towns and villages in Saraj and Kulu Tahsils in the Kangra district. He also inspected 13 villages in Lahaul Rupi, and Mandi States in the Kangra District. Part of his tour was undertaken for determining the sanitary conditions along the route which was to be followed by His Honour the Lieutenant-Governor, Punjab, in his autumn tour.

45. During the first quarter of the year Dr. K. A. Rahman visited and reported on the sanitary condition of the towns of Sahiwal, Bhakra, Hazro, Pindigheb, Pasrur, Narowal, Tanda Umar, Hariana and Jagadhri, at the same time he inspected vaccination and registration of births and deaths in the above towns and also of Bhalwal, Shahpur, Hasanabdal, Fatehjang, Sambarial, Kila Sobha Singh, Daska, Dasuya, Miani, Garhdiwala and Sadhaura and 498 villages of Shahpur, Attock, Sialkot, Hoshiarpur and Ambala districts. In April, he supervised the medical and sanitary arrangements of the Pehowa Fair in the Karnal district and of the Choa Saidan Shah and the Katas fairs in the Jhelum district. In May he made sanitary and vaccination inspections of the Tarn Taran, Majitha and Jandiala towns in the Amritsar district. On the 8th June he proceeded to Simla and returned to Lahore at the end of July when cholera broke out in an epidemic form at Ferozepore which he visited; soon after he went to Muktsar in connection with the flooding of the town and submitted a report as to the precautions necessary to prevent an outbreak of any infectious disease, which was sent on to Government. From Muktsar he proceeded to Gujranwala and then from there to Panipat and Karnal in connection with the spread of cholera in those towns. On 7th September he attended a meeting at Ferozepore, convened by the Deputy Commissioner in connection with the re-building of Muktsar town. In the last week of September he visited Sialkot, as cholera cases were still occurring there. Like last year he dealt with the cholera enquiry reports and daily cholera returns during the cholera season from May to September.

On October 17th he attended a meeting at Nankana Sahib, convened by the District Traffic Superintendent, Lyallpur, to discuss the necessary arrangements for the coming fair. He then visited and reported on the sanitary condition of Shujabad town in Multan district, after which he went to supervise the medical and sanitary arrangements of Baba Farid Fair at Pakpattan; and later for the same purpose to Nankana Sahib. He attended a meeting of the Sanitary Board held at Lahore on 21st November to discuss proposals for the improvement of sanitation in co-operation with the Society for Promoting Scientific Knowledge. On November 28th he left for Jhang and Dera Ghazi Khan districts returning to Lahore on 21st December 1916. During this tour he inspected Chiniot, Jampur and Rajanpur towns and inspected vaccination and registration of births and deaths in 110 villages in these districts.

46. One hundred and sixty-six inspections of towns and 1,726 of smaller towns and villages were made by the Civil Surgeons during the year as against 184 of towns and 2,238 of villages last year. Assistant Surgeons inspected 50 towns and 321 villages as compared with 43 towns and 1,191 villages in the previous year.

47. With the exception of 3 or 4 districts quinine was distributed throughout the Punjab, to check the spread of malaria, through zaildars, lambardars, vaccination staff, itinerating dispensaries and special malaria gangs. In some towns systematic quininisation of school children was successfully carried out. nI



some districts kerosine oil was sprinkled in drains, tanks and pools for destroying mosquitoes and special gangs were employed to remove weeds and grass from the edges of tanks and large collections of water.

48. Owing to financial stringency it was not possible to do much in the way of filling up depressions, notwithstanding this however in some of the districts gangs were employed to fill up small depressions.

49. The Deputy Sanitary Commissioner remained *ex-officio* Professor of Hygiene at the Medical College, Lahore, throughout the year and delivered the prescribed course of lectures to the M.B. B.S. Class.

50. During the year 77 vaccinators were instructed in the principles of elementary hygiene, and the technique of vaccination at the Punjab Vaccine Institute. Ten classes each lasting a fortnight were held during the winter and were attended by 63 district staff vaccinators 12 special staff vaccinators, 1 vaccinator from the Delhi Province and 1 vaccinator from the Nabha State.

51. The Agent, North-Western Railway, reports that a village named Islamabad near Amritsar on the Amritsar-Pattikasar Railway is being formed and has been laid out with due regard to sanitary principles.

52. The Municipality of Ludhiana has not yet secured the services of a Health Officer and the men working in Sialkot and Rawalpindi have secured appointments on higher pay elsewhere—arrangements are being made to secure other qualified men on higher pay.

The usual class for Sanitary Inspectors was held during the year.

53. The medical and sanitary arrangements at Pehowa Fair (Karnal District) which was held from 29th March to 2nd April were supervised by the Additional Deputy Sanitary Commissioner, who remained there throughout the fair. The usual precautions were taken and everything went off satisfactorily. The number attending the fair was estimated at about 60,000.

As usual the supervision of the sanitary arrangements at the Baba Farid Fair at Pakpattan was entrusted to the Additional Deputy Sanitary Commissioner who arrived at the place on the 30th October. The fair was held on 2nd and 3rd November, arrangements were made to meet the requirements of the usual large gatherings here, the fair however was not largely attended, perhaps on account of zamindars being busy with their work in the fields. The number who passed the Bahishti Gate amounted to 32,925, but it is doubtful if more than 20,000 people can be considered to have been actually present. No accidents whatever occurred during the religious parade on either night.

The Additional Deputy Sanitary Commissioner arrived at Nankana Sahib on 5th November and remained there till the 11th, and in company with the Civil Surgeon, Gujranwala, made rounds of inspection regularly in the town and fair area to see that their instructions were carried out. Between 70,000 and 80,000 pilgrims attended, of whom about 45,000 came by rail. The Khalsa Seval Jatha, Punjab, gave assistance at the railway station, bathing tanks and refreshment stall, and Sardar Uttam Singh of Nankana Sahib and Sardar Narinjan Singh of Gujranwala, with their staff of volunteers rendered much assistance to the pilgrims. Except for the death of a Sadhu in the camp hospital from dysentery the health of the camp was excellent and no cholera or other disease of an infectious nature was reported.



54. As the Provincial Laboratory of the Punjab, the Pasteur Institute  
 Work of the Provincial Laboratory. at Kasauli reported on the specimens noted  
 below :—

Serum diagnosis for typhoid fever	...	...	64
„ „ „ paratyphoid (a) }	..	...	68
„ „ „ „ (b) }	..	...	68
„ „ „ malta fever	...	...	46
Examination of blood for malaria	...	...	33
„ „ sputum, etc., for tubercle bacillus...	...	...	83
„ „ tumours	...	...	86
„ „ water	...	...	2
Wasserman test for syphilis	...	...	131
Miscellaneous tests	...	...	50
Examination of brain for negri bodies	...	...	425
Vaccines sent out	...	...	421 doses.
Autogenous vaccine sent out	...	...	365 „
Total			1,774

LAHORE :

H. HENDLEY, M.D., COLONEL, I.M.S.,

The 15th May 1917.

Sanitary Commissioner, Punjab.



## APPENDIX A.

### PROCEEDINGS OF THE SANITARY BOARD, PUNJAB.

THE constitution of the Board was the same as last year. I held the post of Secretary to the Board throughout the year.

The Board met 4 times during the year.

There was no balance left from the sum of 8 lakhs placed at the disposal of the Sanitary Board as the unexpended balance was withdrawn by Government in October. A fresh grant of 3 lakhs was placed at the disposal of the Sanitary Board for allotment during 1916-17 and from this the following grants were made up to 31st December 1916 leaving a balance of Rs. 39,768 which will be accounted for in the next year's report. It may here be mentioned however that the whole of the grant for 1916-17 including a lakh which in addition was afterwards placed at the disposal of the Board was fully utilized :—

	Rs.
1. Zaffarwal Extension of Bund ... ..	300
2. Bhera Drainage Scheme ... ..	5,841
3. Majitha Drainage Scheme ... ..	2,142
4. Improvement to the Phalga Fair Area ... ..	3,838
5. Dharmsala Combined Water-Supply Scheme ... ..	1,940
6. Kalka Drainage Scheme ... ..	12,645
7. Pipe Line at Chitti Dil Bungalow ... ..	1,099
8. Rural Scheme of the Lyallpur District ... ..	7,520
9. Lalamusa Drainage Scheme ... ..	2,927
10. Nurpur (Rawalpindi District) Fair Area Water-Supply Scheme.	7,000
11. A reservoir at mile 15 of the Gunjal-Sukesar Road	270
12. Jullundur Drainage Scheme ... ..	50,000
13. Sargodha Water-Supply Extension Scheme ... ..	50,000
14. Boring Trial at Pasrur ... ..	2,900
15. Society for Promoting Scientific Knowledge ... ..	20,500
16. Experimental Works ... ..	600
17. Ambala Water-Supply Extension Scheme ... ..	90,710
Total ... ..	2,60,232

The schemes noted below were approved by the Board and administrative sanction accorded in each case—

	Rs.
Repairs to wells of the Lyallpur District ... ..	11,280
Electrification of Amritsar Water Works ... ..	56,509
Repairs to ghats at Thanesar ... ..	21,758
Ambala Water Works Extension Scheme ... ..	89,390

The Board cancelled the administrative sanction accorded to the Amritsar Municipality for the electrification of their water works as the Committee could not proceed with the scheme for lack of funds.

The Board accorded revised administrative sanction to the schemes noted below—

	Rs.
Rupar Drainage Scheme ... ..	37,852
Eminabad Drainage Scheme ... ..	31,751
Majitha Drainage Scheme ... ..	14,206
Sultanwind Paving and Drainage ... ..	17,517
Kalka Drainage scheme ... ..	36,531

The Board after approval recommended to Government in the Civil Department for administrative sanction the Rohtak and Jullundur drainage schemes and sanction was accorded to the former at an estimated cost of Rs. 1,72,831. Government also accorded revised administrative sanction to the Lyallpur Water-Supply Extension Scheme at a revised estimate cost of Rs. 1,55,530.

The following schemes were approved by the Board and recommended to Government in the Public Works Department for technical sanction, which was accorded in each case :—

	Rs.
Nurpur (Rawalpindi District) Fair Area Water-Supply Schemes	25,275
Multan Drainage Scheme ... ..	3,82,992
Rewari Water-Supply Scheme ... ..	2,83,877
Gurdaspur Intramural Drainage Scheme ... ..	18,324
Eminabad Drainage Scheme ... ..	31,751
Rupar Drainage Scheme ... ..	37,852

The Government in the Public Works Department accorded revised technical sanction to the schemes noted below—

	Rs.
Lyallpur Water-Supply Extension Scheme ... ..	1,55,530
Lalamusa Drainage Scheme ... ..	23,817
Majitha Drainage Scheme ... ..	14,206



## APPENDIX B.

## ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT, PUNJAB, FOR THE YEAR 1916.

THE post of Sanitary Engineer was held by Mr. V. Stainton to the 20th October and by Mr. A. R. Astbury to the end of the year.

*Simla.*—*Extension of the water works.*—The Secretary of State has sanctioned the acquisition of the Chair Catchment area and the execution of work that can be carried out with local materials. Estimates for additional sand filters at Dhali, balancing tanks at Cherot and Chair, and for the Mashobra water-supply are being prepared by the Engineer in charge of Water-Works and Drainage.

Several minor improvements and extensions to the water-supply and drainage system have been carried out at a total cost of over Rs. 36,000.

For some time past the plankton of the slow sand filter beds at Dhali has been liable to perforation by bubbles. On the recommendation of the Health Officer the filter beds have been roofed over and light excluded. This has resulted in a pronounced reduction in the rate of growth of algæ, and has enabled the filters to be worked very much longer without scraping, but although the bubbling ceased for a time, it has recently recommenced. Considerable saving in sand has been effected by the roofing, an important matter at Dhali, as the sand has to be lifted 5,000 feet and carried 20 miles costing 9 annas a cubic foot landed at site of the filter beds.

*Viceregal Estates.*—The lighting, ventilation and drainage of the kitchens in Viceregal Lodge have been much improved at a small cost, and alterations made to the dhobi ghâts which should reduce the consumption of water. The whole system has been smoke-tested and found satisfactory.

*Lahore.*—The Lahore sanitation scheme has been prepared in detail by Messrs. Lane-Brown and Hewlett, of Lucknow, and is estimated to cost over 46 lakhs. It is under scrutiny and consideration in this office, and is expected to be submitted shortly to the Sanitary Board.

Minor extensions to the water-supply were made at a cost of Rs. 3,800, and new drainage extensions have been undertaken at an estimated cost of over Rs. 13,000.

The sanitary equipment of the Mayo Hospital, Medical College and other buildings are well advanced, Rs. 1,21,995 having been spent on drainage and Rs. 16,363 on water-supply up to the close of the year. These works have been financed from the funds of the King Edward Memorial. The sanitation on modern lines of Government House, for which an estimate amounting to Rs. 43,051 was sanctioned in 1915, is completed.

The water tower and water-supply in the Borstal Central Jail, for which a revised estimate amounting to Rs. 26,710 is under sanction, was also approaching completion.

*Jandiala.*—The work of filling up depressions and the construction of an extramural drain, an estimate for which amounting to Rs. 21,885 has been sanctioned, was completed during the year at a cost of Rs. 18,461. A part of the work has been omitted, as it has been included in another estimate prepared for draining the western portion of the town. The latter estimate also provides for disposal works. When the work is carried out, the drains, already constructed, will be linked together.

*Majitha.*—A revised estimate amounting to Rs. 14,206 was sanctioned for this work which has been completed. The expenditure up to the close of the year was Rs. 12,174.

*Jullundur.*—An experimental tube well is being sunk in the Empress Gardens in connection with the main drainage scheme which has been sanctioned administratively for Rs. 4,98,473 and for which a detailed project is under preparation. When this well is completed it can be used for irrigating the gardens, and when the drainage works have been constructed it will also be used for flushing drains in one part of the city.

The preparation of a water-supply scheme for the city and *bastis* is awaiting the performances of this well. If the well is a success in regard to yield and quality of water, a project for water-supply scheme from this source will be worked out.

*Sialkot.*—It is satisfactory to note that the Sialkot water-supply from tube well's continues plentiful. The account for the work could not be closed owing to the cost of pumping machinery obtained from England having recently been adjusted.



*Pasrur.*—An experimental tube well (estimated cost Rs. 7,731) has been sunk successfully at a cost of Rs. 7,651. Good coarse water-bearing sand has been found in strata of sufficient thickness to ensure a good supply. The sinking plant was debited to a separate estimate amounting to Rs. 8,208. Experiments in regard to the yield of water are in hand.

*Pathankot.*—The drainage scheme, an estimate for which amounting to Rs. 10,220 was sanctioned, has been carried out by the agency of the district board. Certain defects are being rectified.

*Dalhousie.*—Work on the extension of the water-supply, which was sanctioned for Rs. 15,903 to provide a storage reservoir, was commenced. It is expected to be completed shortly. The total expenditure to the close of the year was Rs. 9,953.

*Gujranwala.*—The detailed project amounting to Rs. 5,21,334 prepared for the water-supply scheme is under consideration of the municipal committee. An experimental tube well is to be sunk to test the suitability of the sub-soil for such wells.

*Wazirabad.*—The drainage scheme was well advanced, except the construction of the outfall and disposal works which was held in abeyance pending consideration of the question of change of alignment and site. It having been finally decided to adhere to the sanctioned alignment, etc., the work will now be completed. The outlay to end of 1916 stood at Rs. 52,054. Another scheme for those portions of the town not yet provided with drains is under preparation.

*Eminabad.*—Work on the drainage scheme (estimated cost Rs. 31,751) was commenced and is in progress. The outlay during the year under report was Rs. 2,377.

*Rawalpindi.*—A supplementary estimate amounting to Rs. 92,368 for the subsidiary works in connection with the drainage system was sanctioned in 1915, and the work was commenced towards the close of that year. The sum of Rs. 40,000 which the municipal committee have hitherto been able to provide has sufficed for five muhallas.

*Ferozepore.*—The work on the intramural drainage scheme was commenced in 1914 and was practically completed during the year at a cost Rs. 29,000 against the sanctioned estimate of Rs. 24,016. The excess is due to rise in prices. Work on the extension of extramural drainage, estimated cost of which was Rs. 4,981, was put in hand by the local body and is in progress.

*Lyalpur.*—An estimate amounting to Rs. 1,55,530 for the main extension to the water-supply scheme was sanctioned and the work started during the year. Good progress has been made and an expenditure to the extent of Rs. 29,845 was incurred to the close of the year. The rest of the work, excluding the supply of pumping plant which has been ordered from England through Messrs. James Simpson and Company and is liable to delay, is being pushed on to completion. Another estimate for Rs. 6,502 for minor improvements to the head-works has been sanctioned.

*Multan.*—The amended project for the water-supply scheme amounting to Rs. 4,10,506 still awaits sanction. The commencement of work on the sanctioned project for the drainage works amounting to Rs. 3,82,565 is yet under the consideration of the local body who are awaiting from Messrs. Lane-Brown and Hewlett, Consulting Engineers of Lucknow, an estimate of cost. This latter scheme contemplates intramural drains and pavements of cement concrete like those provided in a part of Amritsar, instead of the standard brick details as provided for in the sanctioned estimate.

*Shujabad.*—A project for a drainage scheme was sanctioned for Rs. 15,302 in 1915 and has to be revised. Land for the outfall and disposal works has been acquired and special bricks manufactured.

*Ambala.*—Work on extension to the intramural drainage system (the estimated cost Rs. 8,921) was completed during the year at a cost of Rs. 7,740.

The water-supply has been a source of anxiety, as the wells are hardly capable of supplying the demand.

*Dera Ghazi Khan.*—The extension of the water-supply (estimated cost Rs. 1,65,617) was commenced last year and has made good progress, an expenditure of Rs. 46,000 having been incurred before the close of the year. The chief cause of delay in the completion of the work is the non-arrival of the pumping machinery from England.

(Note.—News of the arrival of the plant in Karachi has just been received.)

*Bhera.*—Work on the drainage scheme for which an estimate amounting to Rs. 78,682 was sanctioned in 1915 was put in hand and made progress. The scheme is designed to drain storm water from the depressions round the town.

The out-door staff attached to this office has been employed on surveys and working out drainage schemes for various local bodies. In addition to the Jullundur drainage scheme



which kept the survey staff engaged for some time during the year under report, the schemes which were surveyed and levelled by the staff and which were subsequently worked out in detail in the office are as follows :—

	Rs.
(1) Drainage scheme for the town of Jhang-Maghiana ...	1,96,347
(2) Drainage scheme for Sillanwali in Shahpur ...	58,820
(3) Remodelling and extending the drainage system and filling up depressions at Sangla.	1,06,079
(4) Drainage scheme for Lawrence Military Asylum at Sana-war.	8,609
(5) Drainage scheme for the town of Gurgaon ...	50,028
(6) Improvements to sullage and storm-water drainage from Railway Station compound passing through Ram Talai, Sialkot.	9,682
(7) Drainage for Sonapat Mandi ...	2,676
Total ...	4,32,241

The total cost of the out-door establishment, including the services of the draftsman employed on the preparation of plans for these schemes, has come to Rs. 3,667 for the year, which works out at about 0·84 per cent. on the cost of schemes prepared, excluding that for Jullundur.

In addition to the foregoing scheme, the following projects were also prepared by this office :—

	Rs.
(1) Metering by separate districts, the distribution system of Sialkot water-supply scheme.	6,800
(2) Water-supply for the town, including the extended area of single amended scheme.	1,14,069
Water-supply for the town, including the extended area of single original scheme.	62,000
(3) Water-supply scheme for the town of Mianwali by gravitation from Nammal Dam and for the several villages on the way—rough estimate.	7,40,200

The projects, both rough and fair, which were originally prepared by Executive Engineers in the Public Works Department and the staff of the local bodies, and which were professionally approved by this office, numbered 20, estimated cost Rs. 2,60,281.

Various sanitary schemes completed or in progress in the Province were inspected by the Sanitary Engineer or his Personal Assistant and inspection notes were written and advice given to those concerned.

The accompanying statement shows the water pumped at the various water-works in the Province, together with cost of pumping.



STATEMENT A.

STATEMENT OF WATER PUMPED AND USED IN THE WATER WORKS STATIONS,—SIMLA, LAHORE, AMBALA, AMRITSAR, SARGODHA, LYALLPUR, LUDHIANA, SIALKOT, DERA GHAZI KHAN, TOBA TEK SINGH, GOJRA, PIND DADAN KHAN, JARANWALA, RAWALPINDI, AND MURREE, AND COST OF PUMPING IN 1916.

No.	Name of water works.	Popula- tion sup- plied. No.	Water used, daily average gallons.	Daily con- sump- tion per head, in gallons.	Lift, including friction, in feet.	Daily hours of pumping; average through- out year.	QUANTITY AND COST OF FUEL USED PER ANNUM.		Coal or oil: con- sumption per horse-power hour.	Cost of small stores, and establishment at pumping station.	Total cost of fuel small stores, and establishment.	Cost of pumping, per horse-power hour.	Original level average of water surface in all the wells.	Average of water surface level below ground level of all the wells in the year 1916.	REMARKS.
							Wood or electric current: units.	Coal: cost.							
1	Simla { Cherot Nala Chair }	30,316	367,112	12.11	{ 1,300 2,800 }	9 4	Electric 545,546, cost Rs. 17,048.	1000 maunds cost Rs. 1,469.	...	Rs. A. P. 10,507 0 0	29,024 0 0	0 1 1	...	...	
2	Lahore ...	208,126	2,796,393	13.43	123	17.5	Electric 203,274, cost Rs. 6,352.	...	...	5,090 0 0	11,442 0 0	0 1 2	...	...	
3	Ambala ...	24,491	249,581	10.2	75	18.11	15 maunds cost Rs. 9.	828 tons cost Rs. 12,151.	{ 3 lbs. approxi- mate. }	S. 2,750 0 0 E. 8,712 10 5	23,623 0 5	0 0 7	677	Winter 677 Summer 674	
4	Amritsar ...	140,697	1,471,161	10.5	88	30.6	30 22 tons cost Rs. 404.	274-80 tons cost Rs. 5,123.	{ 20 lbs. }	S. 2,251 0 0 E. 5,310 0 0	13,683 0 0	0 6 5	23' to 26'	23' to 24'	
5	Sargodha...	12,000	88,987	7.4	83	13.43	Nil	19,916 maunds cost Rs. 13,071.	{ 70 lbs. }	7,894 0 0	20,965 0 0	0 1 5	8' 8"	6' 8'	
6	Lyallpur ...	19,578	237,018	12.106	75	14.97	24 maunds cost Rs. 18.	3,805 maunds cost Rs. 2,016.	{ 23.7 lbs. }	S. 334 4 1 E. 2,517 1 9	5,535 6 7	0 4 0	...	...	
7	Ludhiana...	44,170	476,548	10.8	95.5	13.8	...	3,081 maunds cost Rs. 1,898.	{ 9.6 lbs. }	S. 631 15 8 E. 3,336 0 0	5,866 5 8	0 2 11	...	...	
8	Sialkot ...	52,800	315,412	5.9	140	6	78 maunds cost Rs. 52.	360 tons cost Rs. 4,588.	{ 9.7 lbs. }	S. 3,044 2 6 E. 6,250 13 7	13,935 9 3	0 2 11	{ 23' North 29' 31' South 32' }	6" North 6" South	
9	Dera Ghazi Khan ...	17,000	67,954	4.0	100	8.92	92 maunds cost Rs. 49.	235 tons cost Rs. 4,171.	{ 6.5 lbs. }	S. 524 0 6 E. 5,108 3 7	9,852 6 1	0 1 11	781.94	780.76	
10	Toba Tek Singh ...	3,009	120,192	3.9	45	11	Kerosine oil 3,249 gallons cost Rs. 2,741.	...	{ 2 pints. }	S. 232 0 0 E. 1,638 0 0	4,661 5 6	0 5 10	379.6	379.57	
11	Gojra "	10,590	14,178	1.33	61	10	...	Cost Rs. 1,154...	{ 1.2 pint. }	864 0 0	2,018 0 0	0 3 1	...	...	
12	Pind Dadan Khan ...	3,000	36,000	12	46	6.25	36 maunds cost Rs. 48.	189 tons 14 cwt. cost Rs. 2,403.	{ 265 lbs. }	1,291 0 0	3,735 8 0	2 5 3	12	10	
13	Jaranwala ...	...	415,673	...	118	8.76	...	Rs. 2,019 12 0	...	S. 2,524 8 4 E. 813 8 0	5,357 12 4	1 12 0	...	...	
14	Rawalpindi ...	...	23,555	...	104	6	186 maunds cost Rs. 37.	420 tons cost Rs. 8,407.	{ 10.48 lbs. }	2,217 5 0	10,661 6 0	0 1 11	10' 13"	11' 7 3/4"	Population is not known.
15	Murree ...	...	...	...	...	...	1,667 maunds cost Rs. 300.	...	Wood 12.5 seers	154 0 0	454 0 0	0 1 7	Water stored in tanks and kept full.	Water stored in tanks and kept full.	

A. R. ASTBURY,  
Sanitary Engineer to Government, Punjab.



## APPENDIX C.

Statement showing the death rates from cholera, small-pox, fevers, and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns.

Towns.	DATE OF COMPLETION OF WORKS OF		AVERAGE ANNUAL DEATH RATE SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.				AVERAGE ANNUAL DEATH RATE FOR THE FIVE YEARS' PERIOD PRECEDING THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.				REMARKS.
	Drainage.	Water-supply.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	
1	2	3	4	5	6	7	8	9	10	11	12
Ambala ...	...	1895	0·4	0·4	12·0	3·5	0·5	0·4	19·3	6·4	
Simla ...	...	1893	0·02	0·4	13·0	0·8	...	1·1	17·1	1·4	
Ludhiana ...	...	1895	0·5	0·7	15·2	1·8	0·4	2·7	20·8	1·6	
Jagraon ...	...	1907	0·7	1·4	11·5	1·6	0·6	1·5	9·3	2·0	
Ferozepore ...	...	1916	3·2	...	9·0	1·7	0·2	0·7	9·8	1·1	
Zira ...	...	1913	0·9	2·5	14·2	0·6	0·3	4·0	16·6	0·9	
Fazilka ...	...	1913	1·2	1·6	18·8	1·9	2·2	2·6	21·4	1·7	
Lahore ...	...	1881	0·8	0·7	16·7	1·6	1·9	1·6	27·8	2·3	
Amritsar ...	...	1885	0·7	1·3	22·0	2·0	0·4	0·7	31·3	1·8	
Gurdaspur ...	...	1914	0·3	0·1	12·1	3·5	0·8	0·5	13·2	2·6	
Dalhousie ...	...	1894	0·1	0·1	12·0	2·0	...	...	9·6	2·4	
Pathankot ...	...	1915	...	0·1	11·8	4·9	0·8	0·7	12·4	2·8	
Sialkot ...	...	1915	0·5	...	9·5	3·2	3·0	1·2	9·6	2·3	
Gujranwala ...	...	1892	0·6	0·6	16·9	1·3	0·5	0·6	19·7	1·7	
Gujrat ...	...	1906	1·1	0·3	17·5	2·0	0·3	0·2	16·9	1·9	
Sargodha ...	...	1907	...	0·2	4·1	0·3	Not available				
Jhelum ...	...	1908	0·1	0·5	10·5	1·8	1·5	0·3	14·0	2·1	
Pind Dadan Khan ...	...	1909	0·1	1·1	19·9	3·5	1·1	0·7	23·1	3·6	
Rawalpindi ...	...	1907	0·6	0·3	19·0	2·3	0·5	0·1	16·4	3·4	
Murree ...	...	1894	0·1	0·1	16·8	2·3	0·7	0·4	14·8	0·9	
Mianwali ...	...	1904	0·2	0·7	20·2	2·3	Not available.				
Lyallpur ...	...	1904	0·1	0·7	11·1	0·8	*2·8	*0·4	*16·3	*2·1	
Gojra ...	...	1916	...	...	2·0	...	†...	†...	†0·5	†...	
Multan ...	...	1907	0·2	0·9	17·8	2·4	0·01	1·9	16·9	2·4	
Dera Ghazi Khan.	...	1913	...	0·8	15·9	2·0	2·0	0·6	15·9	1·6	
Kalka...	...	1890	0·4	0·1	13·6	2·3	1·7	0·2	15·2	3·9	

\*Figures available for four years only.

†Figures for 1914 and 1915 only.



## ANNUAL FORM No. I.

STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB  
DURING THE YEAR 1916.

No.	2	3			4			5			6	7	8	9			10
		POPULATION ACCORDING TO CENSUS OF 1911.*			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females born	Excess of irths over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.			No.
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
AMBALA DIVISION.																	
1	Hissar ...	428,453	386,431	804,889	19,303	17,842	37,145	24.0	22.2	46.1	108.2	14.3	...	25.5	23.7	49.2	1
2	Rohtak ...	385,401	329,433	714,834	18,900	17,869	36,769	26.4	25.0	51.4	105.8	25.0	...	26.5	24.2	50.6	2
3	Gurgaon ...	389,215	339,952	729,167	18,445	16,566	35,311	25.3	23.1	48.4	109.4	20.9	...	25.0	23.3	48.2	3
4	Karnal ...	437,698	362,089	799,787	21,953	19,782	41,735	27.4	24.7	52.2	111.0	22.3	...	25.7	23.7	49.3	4
5	Ambala ...	357,470	275,083	632,553	14,435	13,679	28,114	22.8	21.6	44.4	105.5	12.1	...	22.9	21.3	44.1	5
6	Simla ...	22,015	12,955	34,970	415	334	749	11.8	9.6	21.4	124.3	...	3.0	10.8	9.8	20.6	6
JULLUNDUR DIVISION.																	
7	Kangra ...	398,401	363,285	766,686	13,098	12,550	25,648	17.1	16.4	33.5	104.4	...	1.6	19.5	18.3	37.7	7
8	Hohiarpur ...	501,510	417,059	918,569	19,796	18,389	38,185	21.6	20.0	41.6	107.7	13.4	...	21.7	20.0	41.7	8
9	Jullundur ...	440,599	347,357	787,956	18,435	17,675	36,110	23.4	22.4	45.8	104.3	19.3	...	23.1	21.9	45.0	9
10	Ludhiana ...	293,531	223,661	517,192	18,327	12,261	25,588	25.8	23.7	49.5	108.7	20.7	...	25.1	23.4	48.5	10
11	Ferozepore ...	520,863	412,631	933,499	25,669	23,568	49,177	27.5	25.2	52.7	106.2	19.2	...	26.1	23.8	49.9	11
LAHORE DIVISION.																	
12	Lahore ...	581,498	436,244	1,017,742	27,313	24,548	51,861	26.8	24.1	51.0	111.3	20.1	...	25.1	22.8	47.8	12
13	Amritsar ...	495,533	383,778	879,311	23,316	21,468	44,784	26.5	24.4	50.9	105.6	18.2	...	26.1	24.0	50.1	13
14	Gurdaspur ...	466,115	366,446	832,561	19,969	18,508	38,477	24.0	22.2	46.2	107.9	12.4	...	24.6	22.9	47.5	14
15	Sialkot ...	530,755	432,524	963,279	23,942	21,774	45,716	24.9	22.6	47.5	110.0	12.9	...	24.9	22.9	47.8	15
16	Gujranwala ...	518,251	405,168	923,419	22,698	20,508	43,206	24.6	22.2	46.8	110.7	8.2	...	23.7	21.1	44.7	16
RAWALPINDI DIVISION.																	
17	Gujrat ...	400,596	345,038	745,634	15,818	14,495	35,313	21.2	19.4	40.7	109.1	9.9	...	23.4	21.3	44.7	17
18	Shabpur ...	376,886	310,480	687,366	14,981	13,122	28,103	21.8	19.1	40.9	114.2	12.5	...	21.6	19.3	40.8	18
19	Jhelum ...	262,228	241,967	504,195	10,165	8,806	18,971	20.2	17.5	37.6	115.4	8.5	...	20.0	17.9	37.9	19
20	Rawalpindi ...	267,724	239,918	507,642	10,284	9,292	19,576	20.3	18.3	38.6	110.7	5.0	...	20.8	19.0	39.8	20
21	Attock ...	270,392	244,894	515,286	10,925	9,753	20,678	21.2	18.9	40.1	112.0	10.8	...	21.1	18.8	39.9	21
22	Mianwali ...	179,897	161,480	341,377	7,761	6,815	14,576	22.7	20.0	42.7	113.9	2.4	...	22.7	20.1	42.8	22
MULTAN DIVISION.																	
23	Montgomery ...	276,119	227,996	504,115	13,193	12,052	25,245	26.2	23.9	50.1	109.5	24.6	...	22.9	20.2	43.0	23
24	Lyallpur ...	503,644	385,251	888,895	23,586	21,799	45,385	26.5	24.5	51.1	108.2	28.0	...	25.4	23.5	48.8	24
25	Jhang ...	277,128	238,398	515,526	13,416	11,918	25,334	26.0	23.1	49.1	112.6	23.2	...	23.9	21.4	45.3	25
26	Multan ...	435,410	365,965	801,375	19,381	17,074	36,455	24.2	21.3	45.5	113.5	15.5	...	22.3	19.7	42.0	26
27	Muzaffargarh ...	308,350	261,111	569,461	12,512	10,424	22,936	22.0	18.3	40.3	120.0	5.6	...	20.7	17.9	38.8	27
28	Dera Ghazi Khan ...	272,409	27,451	499,860	8,504	6,904	15,408	17.0	13.8	30.8	123.2	3.9	...	16.7	14.0	30.7	28
	Total ...	10,608,101	8,729,045	19,337,146	461,540	420,006	881,546	23.9	21.7	45.6	109.9	14.9	...	23.5	21.4	44.9	-

\*Excluding population of military cantonments.



## STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

1	2	3	4	5			6		7		
No.	DISTRICTS.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1911).			BIRTHS.		NUMBER OF DEATHS REGISTERED.		
				Males.	Females.	Total.	Total number.	Birth rate per 1,000 of population.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar ...	5,213	154	438,458	366,431	804,889	37,145	46.1	13,449	12,147	25,596
2	Rohtak ...	2,248	318	385,401	329,433	714,834	36,760	51.4	9,910	8,928	18,838
3	Gurgaon ...	2,264	322	389,215	339,952	729,167	35,311	48.4	10,457	9,596	20,053
4	Karnal ...	3,153	254	437,698	362,089	799,787	41,735	52.2	12,542	11,333	23,875
5	Ambala ...	1,851	342	357,470	275,083	632,553	28,114	44.4	10,437	9,983	20,425
6	Simla ...	101	346	22,015	12,955	34,970	749	21.4	464	385	849
	JULLUNDUR DIVISION.										
7	Kangra ...	9,978	77	398,401	368,285	766,686	25,648	33.5	13,553	13,386	26,939
8	Hoshiarpur ...	2,247	409	501,510	417,059	918,569	38,185	41.6	13,472	12,394	25,866
9	Jullundur ...	1,431	551	440,599	347,357	787,956	36,110	45.8	10,510	10,336	20,846
10	Ludhiana ...	1,452	356	293,531	223,661	517,192	25,588	49.5	7,535	7,270	14,905
11	Ferozepore ...	4,286	218	520,868	412,631	933,499	49,177	52.7	16,705	14,543	31,248
	LAHORE DIVISION.										
12	Lahore ...	2,824	360	581,498	436,244	1,017,742	51,861	51.0	16,859	14,540	31,399
13	Amritsar ...	1,601	549	495,533	383,778	879,311	44,784	50.9	15,113	13,598	28,711
14	Gurdaspur ...	1,889	441	466,115	366,446	832,561	38,477	46.2	14,886	13,285	28,171
15	Sialkot ...	1,991	484	530,755	432,524	963,279	45,716	47.5	17,398	15,949	33,347
16	Gujranwala ...	4,082	226	518,251	405,168	923,419	43,206	46.8	18,676	16,934	35,610
	RAWALPINDI DIVISION.										
17	Gujrat ...	2,051	364	400,596	345,038	745,634	30,313	40.7	11,955	10,982	22,937
18	Shahpur ...	5,097	135	376,886	310,480	687,366	28,103	40.9	10,222	9,327	19,549
19	Jhelum ...	2,813	179	262,228	241,967	504,195	18,971	37.6	7,570	7,080	14,650
20	Rawalpindi ...	2,010	253	267,724	239,918	507,642	19,576	38.6	9,018	8,031	17,049
21	Attock ...	4,025	128	270,392	244,894	515,286	20,678	40.1	8,083	7,001	15,084
22	Mianwali ...	5,395	63	179,897	161,480	341,377	14,576	42.7	6,945	6,802	13,747
	MULTAN DIVISION.										
23	Montgomery ...	4,465	113	276,119	227,996	504,115	25,245	50.1	6,678	6,174	12,852
24	Lyallpur ...	3,340	266	503,644	385,251	888,895	45,385	51.1	10,456	10,091	20,547
25	Jhang ...	3,363	153	277,128	238,398	515,526	25,334	49.1	7,123	6,233	13,356
26	Multan ...	6,107	131	435,410	365,965	801,375	36,455	45.5	12,379	11,636	24,015
27	Muzaffargarh ...	6,052	94	308,350	261,111	569,461	22,936	40.3	10,397	9,362	19,759
28	Dera Ghazi Khan ...	5,325	94	272,409	227,451	499,860	15,408	30.8	7,081	6,366	13,447
	Total ...	96,654	200	10,608,101	8,729,045	19,337,146	881,546	45.6	309,973	283,697	593,670

NOTE.—Those born dead are not included



## No. II.

## DISTRICT OF THE PUNJAB DURING THE YEAR 1916.

8	9											10			11
Number of deaths of males to every 100 deaths of females.	DEATHS PER 1,000 OF POPULATION FROM											MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.			No.
	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Males.	Females.	Total.	
									Males.	Females.	Total.				
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
110·7	0·02	0·1	0·4	20·1	1·0	1·7	0·3	8·2	30·7	33·2	31·8	28·5	30·8	29·6	1
111·0	0·1	0·03	0·04	14·2	0·7	1·7	0·5	9·1	25·7	27·1	26·4	33·1	35·3	34·1	2
109·0	0·1	0·02	0·1	12·9	0·8	2·0	0·6	11·0	26·9	28·2	27·5	36·1	39·1	37·5	3
110·7	0·3	0·1	0·2	16·8	0·5	2·1	0·4	9·6	28·7	31·3	29·9	37·7	42·3	39·8	4
104·5	0·1	0·1	2·2	16·1	0·9	6·2	0·2	6·6	29·2	36·3	32·3	33·4	41·0	36·7	5
120·5	0·03	...	...	9·2	1·6	4·8	0·3	8·4	21·1	29·7	24·4	19·2	24·1	21·0	6
101·2	0·02	0·01	0·001	22·4	1·3	3·9	0·4	7·2	34·0	36·4	35·1	28·1	30·1	29·1	7
108·7	0·01	0·04	0·02	19·7	0·1	2·7	0·3	5·4	26·9	29·7	28·2	32·0	35·9	34·3	8
101·7	0·1	0·1	0·1	16·0	0·6	3·3	0·3	6·0	23·9	29·8	26·5	31·3	39·3	34·9	9
105·0	0·3	0·1	0·1	13·4	0·7	2·4	0·3	11·6	26·0	32·5	28·8	30·7	38·4	34·0	10
114·9	0·2	0·4	0·01	17·2	0·8	2·2	0·3	12·5	32·1	35·2	33·5	27·8	32·8	30·0	11
115·9	0·1	0·3	0·1	18·1	0·7	1·8	0·5	9·0	29·0	33·3	30·9	29·1	34·2	31·3	12
111·1	0·1	0·4	0·1	19·6	0·9	4·1	0·4	7·1	30·5	35·4	32·7	36·6	44·5	40·0	13
112·1	0·02	0·1	0·2	17·9	2·4	10·9	0·3	2·0	31·9	36·3	33·8	33·6	39·4	36·1	14
109·1	0·2	0·1	0·1	20·9	1·7	4·9	0·4	6·4	32·8	36·9	34·6	33·2	39·1	35·8	15
110·3	0·2	0·01	0·1	30·9	0·3	0·8	0·5	5·9	36·0	41·8	38·6	33·0	37·4	34·9	16
108·9	0·1	0·1	0·01	19·9	0·7	2·8	0·4	6·8	29·8	31·8	30·8	31·3	35·5	33·3	17
109·6	0·004	0·1	0·002	17·3	0·5	1·3	0·4	8·9	27·1	30·0	28·4	25·5	28·2	26·8	18
106·9	...	0·1	0·01	19·8	0·5	1·8	0·5	6·4	28·9	29·3	29·1	30·7	32·7	31·6	19
112·3	0·04	0·01	1·3	21·2	3·9	2·7	0·5	4·0	33·7	33·5	33·6	34·9	38·2	36·8	20
115·5	...	0·02	0·004	21·0	0·1	2·5	0·4	5·2	29·9	28·6	29·3	29·2	31·0	30·1	21
102·1	0·04	0·2	...	32·8	0·7	0·7	0·4	5·5	38·6	42·1	40·3	26·1	26·1	26·1	22
108·2	...	0·4	0·04	18·5	0·1	0·3	0·3	5·9	24·2	27·1	25·5	20·9	22·9	21·8	23
103·6	0·1	0·3	0·01	14·9	0·4	1·0	0·4	6·0	20·8	26·2	23·1	21·8	27·3	24·2	24
114·3	0·02	0·02	0·04	16·1	0·5	1·0	0·2	8·0	25·7	26·2	25·9	25·2	26·6	25·9	25
106·4	0·004	0·3	...	22·6	0·4	0·1	0·2	6·4	28·4	31·8	30·0	22·9	24·9	23·8	26
111·1	0·01	0·3	...	29·8	0·2	0·4	0·5	3·6	33·7	35·9	34·7	25·1	26·0	25·5	27
111·2	...	0·1	...	22·0	0·6	0·6	0·4	3·3	26·0	28·0	26·9	20·7	20·8	20·7	28
109·3	0·1	0·2	0·2	19·4	0·8	2·6	0·4	7·1	29·2	32·5	30·7	29·9	33·9	31·7	



## ANNUAL FORM No. III.

## DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1916.

1	2	3												4	5
No.	DISTRICTS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	AMBALA DIVISION.														
1	Hissar ...	2,400	2,068	1,938	2,154	2,327	2,307	2,040	2,069	2,167	2,041	2,165	1,910	25,596	1
2	Rohtak ...	1,833	1,311	1,090	1,247	1,501	1,595	1,422	1,698	2,029	1,730	1,758	1,624	18,538	2
3	Gurgaon ...	1,890	1,432	1,102	1,287	1,354	1,296	1,376	1,805	2,411	2,210	2,094	1,793	20,053	3
4	Karnal ...	2,278	1,828	1,546	1,583	2,134	2,051	1,942	2,233	2,146	2,034	2,005	2,090	23,875	4
5	Ambala ...	1,789	1,698	932	1,759	1,551	1,231	1,332	1,481	1,768	1,968	1,873	1,992	20,125	5
6	Simla ...	57	50	80	59	66	74	73	65	119	78	72	56	849	6
	JULLUNDUR DIVISION.														
7	Kangra ...	2,132	2,131	2,100	1,900	2,286	2,121	1,879	2,514	3,195	2,670	2,032	2,029	26,939	7
8	Hoshiarpur ...	2,173	1,972	1,942	2,160	2,347	1,866	1,835	2,076	2,652	2,451	2,184	2,208	25,866	8
9	Jullundur ...	1,564	1,452	1,441	1,408	1,854	1,568	1,698	2,078	2,125	1,947	1,932	1,779	20,846	9
10	Ludhiana ...	1,283	1,001	1,024	1,171	1,337	1,206	1,190	1,354	1,486	1,300	1,284	1,236	14,905	10
11	Ferozepore ...	2,711	2,626	2,662	2,789	3,168	2,910	2,547	2,424	2,433	2,340	2,400	2,238	31,248	11
	LAHORE DIVISION.														
12	Lahore ...	2,443	2,065	2,223	2,270	2,897	2,566	2,377	2,469	3,002	3,053	3,154	2,880	31,399	12
13	Amritsar ...	1,895	1,722	1,949	2,272	2,693	2,231	2,103	2,275	3,030	2,896	3,068	2,527	28,711	13
14	Gurdaspur ...	1,739	1,687	1,755	2,230	2,828	2,953	1,730	2,054	3,062	3,361	3,183	2,489	28,171	14
15	Sialkot ...	1,961	1,827	1,779	1,952	2,307	1,935	1,928	2,429	3,781	5,320	4,808	3,320	33,347	15
16	Gujranwala ...	2,186	1,843	1,659	1,524	2,015	1,712	1,742	2,097	2,893	6,234	6,611	5,059	35,610	16
	RAWALPINDI DIVISION.														
17	Gujrat ...	1,989	1,495	1,355	1,473	1,531	1,368	1,338	1,496	2,218	3,348	2,969	2,323	22,937	17
18	Shahpur ...	1,810	1,555	1,258	1,303	1,694	1,761	1,355	1,285	1,459	2,051	2,229	1,789	19,549	18
19	Jhelum ...	1,465	1,268	1,008	916	845	837	867	914	1,382	1,957	1,863	1,388	14,650	19
20	Rawalpindi ...	1,950	1,557	1,288	1,090	1,075	1,000	907	971	1,580	1,981	1,952	1,758	17,049	20
21	Attock ...	2,051	1,565	1,237	1,051	993	922	932	899	1,035	1,339	1,504	1,556	15,084	21
22	Mianwali ...	1,265	1,018	834	884	850	963	827	772	961	1,658	2,028	1,687	13,747	22
	MULTAN DIVISION.														
23	Montgomery ...	1,333	982	790	824	906	981	915	948	1,035	1,224	1,535	1,376	12,852	23
24	Lyallpur ...	1,691	1,440	1,380	1,475	1,831	1,961	1,763	1,673	1,769	1,879	1,883	1,502	20,547	24
25	Jhang ...	1,422	1,252	1,056	814	1,014	1,065	967	939	983	1,145	1,276	1,423	13,356	25
26	Multan ...	2,381	2,109	1,889	1,525	1,717	1,563	1,356	1,356	1,485	2,190	3,164	3,277	24,015	26
27	Muzaffargarh ...	1,649	1,451	1,349	1,133	1,292	1,183	965	863	1,184	2,469	3,392	2,829	19,759	27
28	Dera Ghazi Khan	806	823	823	753	789	958	963	719	953	1,700	2,325	1,755	13,447	28
	Total for the Province.	50,209	43,173	40,424	41,001	47,242	43,387	40,369	43,961	54,351	64,574	66,783	58,196	593,670	
	Ratio of deaths per 1,000 in each month.	2.60	2.23	2.09	2.12	2.44	2.24	2.09	2.27	2.81	3.34	3.45	3.01	30.70	



ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM  
DIFFERENT DISEASES IN THE DISTRICTS OF THE PUNJAB  
DURING THE YEAR 1916.



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
No.	Divisions.	Districts.	DISEASES.	UNDER 1 YEAR.		1 YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1		Hissar.	Cholera ...	...	...	...	...	...	...	41	...
			Small-pox ...	10	3	19	14	10	9	2	3
			Plague ...	...	...	...	...	5	4	8	6
			Fevers ...	2,428	1,934	2,196	2 165	477	477	105	130
			Dysentery and Diarrhoea ...	3	2	2	4	8	9	21	12
			Respiratory diseases ...	2	4	7	5	9	10	13	12
			Injuries ...	1	1	3	5	8	9	10	8
			All other causes ...	1,536	1,325	1,288	1,174	212	208	154	122
			Total ...	3,980	3,269	3,515	3,367	729	726	314	293
2		Rohtak.	Cholera ...	...	...	1	1	...	3	3	1
			Small-pox ...	3	1	7	8	1	3	...	2
			Plague ...	...	...	1	2	1	...	2	1
			Fevers ...	1,171	1,036	1,070	1,049	278	268	166	153
			Dysentery and Diarrhoea ...	20	31	44	38	15	14	13	11
			Respiratory diseases ...	36	31	28	22	18	14	21	9
			Injuries ...	4	5	10	15	19	8	15	17
			All other causes ...	2,332	1,943	772	669	68	47	28	35
			Total ...	3,576	3,047	1,933	1,804	400	357	248	229
3		Gurgaon.	Cholera ...	...	...	...	...	2	3	5	6
			Small-pox ...	4	2	1	...	1	5	...	...
			Plague ...	...	...	...	...	3	2	3	2
			Fevers ...	1,616	1,406	825	842	180	159	87	100
			Dysentery and Diarrhoea ...	3	5	55	35	48	26	28	17
			Respiratory diseases ...	82	88	100	111	52	33	35	21
			Injuries ...	...	...	2	2	7	7	14	15
			All other causes ...	1,536	1,390	1,027	1,104	179	128	68	58
			Total ...	3,241	2,891	2,010	2,094	472	363	240	219
4	AMBALA.	Karnal.	Cholera ...	4	2	1	...	4	14	9	11
			Small-pox ...	11	4	6	7	5	6	2	2
			Plague ...	16	4	4	2	...	1	2	...
			Fevers ...	1,928	1,342	1,352	1,294	357	362	185	166
			Dysentery and Diarrhoea ...	85	48	30	25	20	15	10	5
			Respiratory diseases ...	118	80	29	52	22	21	30	18
			Injuries ...	10	3	12	4	27	11	23	11
			All other causes ...	2,152	2,125	940	824	118	45	38	44
			Total ...	4,324	3,608	2,374	2,208	553	475	299	258
5		Ambala.	Cholera ...	...	...	...	...	...	...	2	1
			Small-pox ...	6	2	8	9	3	10	5	2
			Plague ...	67	65	52	53	41	43	38	56
			Fevers ...	1,539	1,580	857	944	198	190	141	150
			Dysentery and Diarrhoea ...	93	73	55	44	11	6	7	3
			Respiratory diseases ...	583	524	309	316	73	77	54	62
			Injuries ...	2	1	2	1	2	...	4	3
			All other causes ...	676	723	400	391	79	80	55	52
			Total ...	2,966	2,968	1,683	1,758	407	406	306	329
6		Simla.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	...	...	...	...	...	...	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	46	38	15	14	4	5	2	6
			Dysentery and Diarrhoea ...	2	3	1	3	3	2	4	1
			Respiratory diseases ...	30	8	16	10	5	4	4	5
			Injuries ...	...	...	...	...	...	...	...	...
			All other causes ...	61	55	27	8	6	4	3	5
			Total ...	139	104	59	35	18	15	13	17



No. IV.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1916.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2	1	4	3	2	2	...	1	...	...	...	...	9	7	1
1	2	...	...	...	...	...	...	...	...	...	...	42	31	
20	19	48	52	35	36	28	22	18	20	8	6	170	165	
47	48	489	559	240	336	333	264	514	300	1,579	1,522	8,408	7,735	
28	20	56	35	59	38	75	56	59	77	97	84	438	337	
29	25	51	43	121	101	152	132	166	141	198	160	748	633	
11	10	13	14	25	17	21	19	26	20	31	25	149	128	
90	81	98	92	61	70	46	39	...	...	...	...	3,485	3,111	
228	206	759	798	543	600	655	533	813	558	1,913	1,797	13,449	12,147	
...	2	6	7	3	2	2	1	2	2	...	1	17	20	2
...	...	...	...	...	...	...	...	...	...	...	...	11	14	
3	4	2	4	2	3	1	...	1	1	1	2	14	17	
178	119	260	304	276	319	353	338	488	355	1,103	896	5,343	4,837	
17	11	12	20	9	13	16	12	38	22	71	50	265	222	
7	17	27	39	35	47	52	49	105	112	274	265	603	605	
10	21	22	46	18	38	22	19	10	13	6	16	136	198	
30	30	57	83	50	50	44	30	37	32	103	96	3,521	3,015	
245	204	386	503	393	472	490	449	681	537	1,558	1,326	9,910	289	
8	6	5	6	5	8	5	8	7	8	8	10	45	55	3
...	...	...	...	...	...	...	...	...	...	...	...	6	7	
4	3	3	5	4	...	5	4	4	5	...	2	26	28	
78	65	257	291	229	260	369	275	336	285	860	862	4,257	4,545	
25	21	31	39	29	33	36	21	34	26	44	50	333	273	
31	22	61	71	68	58	83	75	83	79	130	143	728	701	
15	16	31	32	32	22	28	37	26	47	31	45	186	223	
69	52	198	179	144	156	181	122	232	157	612	418	4,246	3,764	
230	185	586	623	511	542	707	542	775	607	1,685	1,530	10,457	9,596	
12	20	19	13	17	19	17	11	1	3	14	6	98	99	4
1	2	...	...	...	...	...	...	...	...	...	...	25	21	
9	12	27	41	6	12	11	5	4	6	...	1	79	85	
218	158	459	487	461	516	596	578	576	460	863	1,071	6,995	6,434	
9	9	7	9	7	6	3	8	6	7	29	19	206	151	
33	31	106	168	125	101	75	66	116	162	199	145	853	844	
28	17	19	30	20	25	19	23	17	12	17	13	192	149	
25	30	121	74	83	84	120	53	116	64	381	207	4,094	3,550	
335	279	758	822	719	763	841	744	836	714	1,503	1,462	12,542	11,333	
7	...	18	7	12	3	4	1	1	...	2	1	46	13	5
2	1	1	1	...	...	...	...	...	...	...	...	25	25	
51	44	101	112	95	99	82	76	67	77	94	87	688	712	
137	124	296	363	353	341	410	319	352	317	829	727	5,112	5,055	
8	10	17	18	25	16	20	18	21	12	63	45	320	243	
54	62	143	134	160	142	177	128	167	119	358	256	2,078	1,820	
6	3	20	16	19	9	9	7	5	3	1	2	70	45	
49	46	113	147	102	137	156	118	146	114	322	267	2,098	2,075	
314	290	709	798	766	747	858	665	759	642	1,469	1,385	10,437	9,988	
...	...	1	...	...	...	...	...	...	...	...	...	1	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
6	11	26	18	19	18	9	10	8	9	31	28	168	157	
4	2	4	4	1	9	2	2	2	3	2	3	25	32	
4	5	9	5	3	5	4	5	6	5	10	19	91	71	
...	...	...	...	3	...	1	...	4	1	1	2	9	3	
2	3	13	11	15	12	14	7	10	8	21	9	172	122	
16	21	53	38	41	44	30	24	30	26	65	61	464	385	



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8			
No.	Divisions.	Districts.	DISEASES.	UNDER 1 YEAR.		1 YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.			
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.		
1	2	3	4	5	6	7	8	9	10	11	12		
7	JULLUNDUR.	KANGRA.	Cholera ... ..	...	...	...	...	...	...	...	...		
			Small-pox ... ..	...	...	...	...	...	...	...	1	...	
			Plague ... ..	...	...	...	...	...	...	...	...	...	
			Fevers ... ..	...	1,681	1,204	1,325	1,416	299	422	188	255	
			Dysentery and Diarrhoea ... ..	...	215	125	88	69	20	35	9	29	
			Respiratory diseases ... ..	...	422	378	145	166	115	55	89	40	
			Injuries ... ..	...	56	35	9	5	13	5	19	4	
			All other causes ... ..	...	1,248	1,342	218	146	195	115	112	109	
			Total ... ..	...	3,622	3,084	1,785	1,802	642	632	418	437	
			8	JULLUNDUR.	HOSHIANPUR.	Cholera ... ..	...	1	...	...	...	...	...
Small-pox ... ..	...	5				2	12	11	4	...	...	...	1
Plague ... ..	...	...				...	...	...	1	...	...	...	...
Fevers ... ..	...	1,783				1,631	2,214	2,462	504	507	234	231	
Dysentery and Diarrhoea ... ..	...	13				13	1	...	...	...	...	...	...
Respiratory diseases ... ..	...	590				408	226	153	20	23	18	20	
Injuries ... ..	...	5				4	16	25	16	13	22	8	
All other causes ... ..	...	1,805				1,644	378	388	54	60	21	23	
Total ... ..	...	4,202				3,752	2,847	3,039	599	603	295	284	
9	JULLUNDUR.	JULLUNDUR.				Cholera ... ..	...	2	...	6	4	5	3
			Small-pox ... ..	...	13	14	26	13	4	3	5	6	
			Plague ... ..	...	1	...	4	6	2	8	2	8	
			Fevers ... ..	...	1,262	1,388	1,631	1,934	355	351	152	163	
			Dysentery and Diarrhoea ... ..	...	47	50	71	73	10	13	2	2	
			Respiratory diseases ... ..	...	562	472	222	169	22	17	9	16	
			Injuries ... ..	...	...	1	12	19	30	16	14	16	
			All other causes ... ..	...	1,910	2,041	219	196	24	17	10	9	
			Total ... ..	...	3,797	3,966	2,191	2,414	452	428	196	224	
			10	JULLUNDUR.	LUDHIANA.	Cholera ... ..	...	...	...	4	5	2	12
Small-pox ... ..	...	11				5	5	7	9	4	...	2	
Plague ... ..	...	...				...	...	...	...	...	2	2	
Fevers ... ..	...	435				488	442	391	242	220	246	257	
Dysentery and Diarrhoea ... ..	...	29				18	21	14	7	11	25	9	
Respiratory diseases ... ..	...	122				91	115	78	62	45	37	15	
Injuries ... ..	...	7				4	6	8	12	5	4	8	
All other causes ... ..	...	2,048				1,893	414	443	60	42	55	93	
Total ... ..	...	2,652				2,499	1,003	945	397	329	381	395	
11	JULLUNDUR.	FEROZEPUR.				Cholera ... ..	...	...	...	19	10	11	6
			Small-pox ... ..	...	25	20	70	67	48	39	8	5	
			Plague ... ..	...	...	...	1	...	...	1	1	...	
			Fevers ... ..	...	2,128	2,072	2,335	2,055	571	545	295	233	
			Dysentery and Diarrhoea ... ..	...	...	...	81	53	46	29	33	20	
			Respiratory diseases ... ..	...	36	23	130	91	92	81	67	55	
			Injuries ... ..	...	...	...	44	24	22	11	17	10	
			All other causes ... ..	...	3,031	2,707	1,913	1,765	140	117	93	66	
			Total ... ..	...	5,220	4,822	4,593	4,065	930	829	521	397	
			12	LAHORE.	LAHORE.	Cholera ... ..	...	...	...	4	5	6	7
Small-pox ... ..	...	60				61	138	124	96	85	9	12	
Plague ... ..	...	...				...	1	...	6	4	8	5	
Fevers ... ..	...	2,178				1,701	3,002	2,875	471	519	216	265	
Dysentery and Diarrhoea ... ..	...	67				40	72	35	50	34	60	48	
Respiratory diseases ... ..	...	177				149	178	103	50	31	33	21	
Injuries ... ..	...	16				8	38	25	43	27	39	25	
All other causes ... ..	...	2,834				2,623	1,301	975	162	105	34	38	
Total ... ..	...	5,332				4,583	4,734	4,142	884	812	409	423	



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1916.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
2	1	3	..	2	1	2	..	1	..	..	..	10	2	7
1	..	..	..	1	1	..	..	..	..	..	..	3	1	
..	..	..	..	..	1	..	..	..	..	..	..	..	1	
142	279	496	876	684	829	646	699	682	646	2,316	2,087	8,459	8,713	
7	18	44	15	20	29	39	40	47	47	20	58	509	465	
99	59	120	110	125	128	141	99	154	150	214	165	1,624	1,350	
8	5	15	1	28	15	9	7	6	4	8	4	171	95	
137	110	142	234	121	125	209	179	178	198	217	201	2,777	2,759	
396	472	820	1,246	981	1,129	1,046	1,024	1,068	1,045	2,775	2,515	13,553	13,386	
1	..	1	..	1	1	1	..	..	..	1	1	6	3	8.
..	..	2	..	1	..	..	..	..	..	..	..	24	13	
1	..	..	1	..	1	2	2	1	3	..	3	5	11	
182	191	392	598	433	498	533	444	693	456	2,231	1,794	9,199	8,862	
1	1	1	1	..	2	2	2	6	..	4	2	28	21	
24	27	79	79	72	73	98	55	78	56	242	125	1,447	1,019	
9	4	21	14	27	7	16	8	16	4	21	15	172	102	
16	16	41	58	43	50	40	29	60	24	133	71	2,591	2,363	
234	239	540	751	577	632	692	540	854	543	2,632	2,011	13,472	12,394	
4	3	8	1	4	6	3	4	1	3	2	1	37	29	9
..	..	2	1	1	1	..	..	..	..	..	..	51	38	
..	2	4	2	..	6	2	5	1	2	2	2	18	41	
132	140	271	331	231	314	271	279	398	291	1,475	1,200	6,178	6,391	
1	3	18	9	12	12	16	8	8	13	66	35	251	218	
16	19	54	59	65	49	77	36	104	53	360	242	1,491	1,132	
4	4	20	9	16	9	13	5	11	4	18	25	138	108	
5	12	24	27	32	21	30	13	28	11	64	32	2,346	2,379	
162	183	401	439	361	418	412	350	551	377	1,987	1,537	10,510	10,336	
18	10	13	9	22	7	16	11	8	3	2	..	96	55	10
..	1	..	2	1	..	..	..	..	..	..	..	26	21	
2	6	5	3	3	8	3	1	2	..	..	1	17	21	
342	285	410	436	449	422	358	362	211	235	347	361	3,482	3,457	
6	10	9	16	12	11	8	7	26	19	43	38	186	153	
47	32	86	53	43	31	59	62	54	93	87	57	662	557	
6	3	19	8	11	4	15	3	10	6	22	9	112	58	
76	86	55	79	94	98	92	87	110	84	50	43	3,054	2,943	
497	433	547	606	635	581	551	533	431	440	551	509	7,635	7,270	
12	5	10	11	12	10	8	8	10	10	5	4	94	72	11
10	9	7	10	6	5	2	1	..	..	..	..	176	156	
..	1	2	1	..	..	..	1	1	..	..	..	5	4	
223	186	410	442	356	384	421	293	435	307	1,321	1,020	8,495	7,537	
20	20	35	35	35	39	39	27	44	30	73	57	406	310	
67	41	142	113	122	103	118	89	147	98	224	168	1,145	862	
20	19	31	21	26	16	19	10	17	9	4	..	200	111	
84	63	147	142	141	146	150	108	171	125	314	252	6,114	5,491	
436	335	784	775	698	703	757	537	825	579	1,941	1,501	16,705	14,543	
8	10	20	4	18	7	6	1	2	4	..	..	74	48	12
5	11	4	2	4	3	1	..	1	..	..	..	318	298	
6	6	7	4	2	3	1	1	..	..	..	..	31	23	
133	230	549	539	499	482	509	378	594	383	1,542	1,303	9,693	8,675	
41	32	39	17	30	19	37	14	15	12	30	26	441	277	
39	41	142	118	81	97	68	59	55	65	186	122	1,009	806	
44	15	19	9	40	19	49	18	37	18	19	11	334	175	
53	53	68	94	106	81	68	83	164	47	229	139	4,959	4,238	
319	398	848	787	780	711	739	554	808	529	2,006	1,601	16,859	14,540	







## O. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1916.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
6	1	7	8	6	8	4	1	8	3	5	1	55	38	13
6	3	2	4	2	3	...	1	...	...	...	...	179	149	
3	3	3	7	6	4	...	4	5	...	1	...	24	32	
108	274	388	585	353	283	369	319	577	343	1,742	1,290	8,949	8,300	
21	12	36	41	50	33	48	19	41	34	83	65	456	338	
89	51	163	87	117	168	156	97	101	59	238	196	1,904	1,713	
13	11	37	19	18	3	17	6	17	4	33	13	235	105	
42	39	47	36	60	53	23	11	31	27	113	89	3,311	2,923	
288	394	683	787	617	555	617	457	780	470	2,218	1,654	15,113	13,598	
1	...	...	1	...	...	2	1	...	...	...	2	5	4	14
...	...	...	2	...	...	2	...	...	...	...	...	38	48	
7	2	15	18	14	12	19	9	6	7	22	12	112	84	
182	188	347	457	340	420	457	304	414	297	1,438	1,123	7,592	7,272	
23	11	39	19	47	40	56	39	69	42	128	89	1,063	942	
53	65	133	157	149	126	163	119	181	161	522	361	5,053	4,048	
2	7	18	11	7	4	6	5	3	5	19	7	125	84	
18	21	47	47	38	28	33	21	35	26	92	60	898	803	
286	294	599	722	596	630	738	498	713	538	2,221	1,654	14,886	13,255	
12	7	7	12	11	7	10	6	6	4	8	6	111	75	15
...	1	1	...	...	1	...	...	...	...	...	...	40	40	
5	3	4	8	...	4	6	3	5	...	4	4	44	42	
399	442	439	568	461	532	472	458	489	456	1,603	1,290	10,264	9,862	
28	26	26	22	28	26	29	20	39	24	162	128	907	733	
89	82	96	78	98	64	105	52	114	79	488	389	2,571	2,172	
12	5	33	6	19	2	16	8	9	6	25	13	214	132	
100	90	112	108	109	115	116	105	112	113	672	464	3,247	2,893	
645	656	718	802	726	751	754	652	774	682	2,962	2,294	17,398	15,949	
21	14	24	9	7	6	2	8	3	4	...	3	93	71	16
...	...	...	...	...	...	...	...	...	...	...	...	4	8	
5	2	10	11	2	1	1	2	3	4	2	4	32	27	
272	213	451	501	532	599	543	519	752	450	2,132	1,415	14,809	13,701	
18	6	11	9	13	11	19	17	10	9	15	8	141	111	
11	9	30	21	39	26	50	48	71	36	106	62	418	303	
5	3	17	8	36	17	51	31	49	35	90	36	321	167	
...	55	146	224	41	98	120	22	39	111	419	452	2,858	2,546	
332	302	639	783	700	758	786	647	927	649	2,764	1,980	18,676	16,934	
6	3	4	11	8	7	1	3	1	...	1	3	50	53	17
...	...	...	...	...	...	1	1	...	...	...	...	24	18	
274	206	328	382	424	416	373	355	443	422	1,602	1,286	7,603	7,246	
16	16	13	12	10	14	9	3	5	6	17	12	276	222	
52	44	67	98	90	73	120	80	108	71	127	169	1,123	966	
17	11	19	15	16	6	11	10	2	3	10	7	147	120	
77	91	109	83	89	83	116	73	96	69	157	110	2,729	2,356	
442	371	543	601	637	599	631	525	655	571	1,914	1,588	11,955	10,982	
...	...	1	...	...	...	...	...	...	...	...	...	1	2	18
...	...	...	...	...	...	...	...	...	...	...	...	26	25	
1	...	...	...	...	...	1	...	...	...	...	...	2	...	
277	285	297	364	289	373	412	376	499	337	1,194	933	6,035	5,118	
30	19	42	22	58	25	45	21	26	12	6	5	223	116	
80	54	111	101	125	79	73	50	25	20	15	15	510	374	
16	19	15	12	6	11	4	6	1	2	...	...	158	108	
25	52	12	47	21	45	11	26	11	16	...	...	3,217	2,884	
429	429	475	546	499	533	546	479	562	437	1,215	953	10,222	9,327	



## ANNUAL FORM

## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
No.	Divisions.	Districts.	DISEASES.	UNDER 1 YEAR.		1 YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
19	RAWALPINDI—CONCLUDED.	JHELUM.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	1	2	1	3	8	4	1	1
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	701	709	1,138	1,185	308	339	155	154
			Dysentery and Diarrhoea ...	17	15	27	17	10	2	3	...
			Respiratory diseases ...	24	17	26	16	5	8	10	13
			Injuries ...	3	...	17	21	29	22	11	11
			All other causes ...	1,108	965	346	326	43	37	21	10
			Total ...	1,854	1,708	1,555	1,568	403	412	201	189
20	RAWALPINDI.	RAWALPINDI.	Cholera ...	...	...	...	...	...	1	...	2
			Small-pox ...	...	...	1	1	...	...	...	1
			Plague ...	...	...	10	12	29	27	30	55
			Fevers ...	660	606	1,040	1,035	314	334	203	180
			Dysentery and Diarrhoea ...	809	708	152	121	9	15	7	5
			Respiratory diseases ...	32	32	29	40	19	9	30	31
			Injuries ...	6	6	14	11	32	11	14	14
			All other causes ...	724	637	124	142	20	24	14	9
			Total ...	2,231	1,983	1,370	1,362	423	421	238	297
21	RAWALPINDI—CONCLUDED.	ATTOCK.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	4	1	...	3	1	...	...	...
			Plague ...	...	...	...	...	1	...	...	...
			Fevers ...	875	723	1,193	1,160	397	346	246	185
			Dysentery and Diarrhoea ...	1	1	14	5	1	2	2	1
			Respiratory diseases ...	15	20	39	47	28	18	36	37
			Injuries ...	2	...	10	10	21	9	15	7
			All other causes ...	1,051	922	215	203	46	49	12	25
			Total ...	1,948	1,667	1,471	1,428	495	424	311	255
22	RAWALPINDI—CONCLUDED.	MIANWALI.	Cholera ...	...	1	1	2	1	...	1	1
			Small-pox ...	5	4	16	27	1	4	...	...
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	1,230	1,118	1,337	1,564	493	555	187	191
			Dysentery and Diarrhoea ...	36	24	17	19	3	2	3	3
			Respiratory diseases ...	5	5	6	6	...	2	2	2
			Injuries ...	2	1	14	21	12	13	9	3
			All other causes ...	664	533	185	179	44	55	17	11
			Total ...	1,992	1,686	1,576	1,818	554	631	219	211
23	MULTAN.	MONTGOMERY.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	20	12	51	33	25	17	4	4
			Plague ...	3	5	2	1	1	2	...	...
			Fevers ...	1,440	1,284	872	828	397	391	259	254
			Dysentery and Diarrhoea ...	12	5	9	4	1	7	4	4
			Respiratory diseases ...	19	9	5	9	4	4	5	1
			Injuries ...	20	9	17	9	5	3	3	1
			All other causes ...	513	403	328	361	55	70	52	47
			Total ...	2,327	1,727	1,284	1,245	488	494	327	311
24	MULTAN.	LYALLPUR.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	...	...	11	4	9	4	6	5
			Plague ...	19	18	63	66	18	10	7	9
			Fevers ...	1	...	1	...	...	1	...	...
			Dysentery and Diarrhoea ...	1,574	1,588	2,076	2,289	478	472	272	295
			Respiratory diseases ...	22	24	49	41	10	9	5	4
			Injuries ...	86	84	63	48	11	13	9	9
			All other causes ...	3	13	61	57	32	24	14	7
			Total ...	2,293	2,211	246	203	25	34	13	10
Total ...				3,993	3,938	2,570	2,713	583	567	326	339



## No. IV—CONTINUED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1916.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
1	...	1	1	...	...	...	...	...	...	...	...	13	11	
1	...	1	...	1	...	1	1	2	...	...	...	6	1	
118	117	279	334	349	361	356	330	412	298	1,257	1,100	5,073	4,927	
...	3	9	10	11	9	12	8	13	5	36	21	138	90	
18	21	53	72	70	68	63	64	77	44	143	108	489	431	
10	3	16	8	21	5	12	5	11	4	21	8	151	87	
13	18	23	53	32	52	33	33	23	10	58	29	1,700	1,533	
161	162	382	478	484	495	477	441	538	361	1,515	1,266	7,570	7,080	
2	1	2	2	1	1	2	2	...	...	1	2	8	11	20
2	...	...	...	...	...	...	...	...	...	...	...	3	2	
47	27	64	51	68	56	29	37	35	35	23	23	335	323	
159	125	418	443	525	544	512	446	501	368	1,273	1,065	5,605	5,146	
2	6	11	7	13	9	15	4	11	10	26	18	1,055	903	
30	27	115	90	154	84	115	80	105	59	180	107	809	559	
9	9	28	5	16	13	13	5	13	1	22	8	167	83	
10	26	35	62	36	52	28	19	20	15	25	18	1,036	1,004	
261	221	673	660	813	759	714	593	685	488	1,550	1,241	9,018	8,031	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	21
...	...	...	2	...	...	...	...	...	...	...	...	5	6	
...	...	...	...	...	...	1	...	...	...	...	...	2	...	
170	127	379	394	511	436	469	401	506	383	1,035	880	5,781	5,035	
...	1	1	2	1	2	3	2	2	4	5	3	30	23	
46	31	84	88	108	88	92	67	89	79	158	132	695	607	
5	3	22	11	23	6	15	3	11	6	15	8	139	63	
16	8	13	19	21	13	19	7	11	7	27	14	1,431	1,267	
237	170	499	516	664	545	599	480	619	479	1,240	1,037	8,083	7,001	
...	1	...	1	...	...	1	1	...	...	1	...	5	7	22
...	...	...	...	1	...	...	...	...	1	1	...	24	36	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
97	112	227	310	295	333	309	301	373	313	947	862	5,545	5,659	
2	1	5	6	11	4	5	6	14	6	39	24	135	95	
7	2	26	13	20	15	17	16	11	7	40	20	134	88	
4	2	8	3	7	4	6	4	4	1	12	...	78	52	
8	7	18	21	19	21	18	16	13	10	38	12	1,024	865	
118	125	284	354	353	377	356	344	415	338	1,078	918	6,945	6,802	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
2	2	3	1	...	...	...	...	...	...	2	3	105	69	
...	...	...	...	...	...	...	...	...	...	...	...	8	11	
215	180	323	322	272	299	269	296	364	282	383	390	4,794	4,526	
2	2	3	3	1	4	3	1	...	1	6	...	41	31	
9	4	12	3	4	3	8	9	10	3	23	11	99	56	
10	3	5	9	6	3	10	2	4	7	18	6	98	52	
24	41	40	76	33	51	33	52	29	49	426	279	1,533	1,429	
262	232	386	414	316	360	323	360	407	342	858	689	6,678	6,174	
2	2	8	7	7	9	4	9	4	6	4	3	55	49	24
4	2	2	3	2	4	1	...	...	1	2	1	118	114	
...	...	2	...	...	...	...	...	1	...	...	...	5	1	
182	192	241	297	241	239	213	228	262	203	1,115	791	6,654	6,594	
5	7	18	3	14	9	21	11	19	16	65	26	228	150	
8	9	28	34	30	29	35	25	59	38	148	112	477	401	
9	6	32	8	11	8	14	8	15	4	11	5	202	140	
14	20	20	45	26	50	18	22	19	12	43	30	2,717	2,642	
224	238	351	397	331	348	306	303	379	280	1,388	968	10,456	10,091	



## DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
No.	Divisions.	Districts.	DISEASES.	UNDER 1 YEAR.		1 YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
				Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
25		JHANG.	Cholera ...	1	...	1	...	1	...	2	1
			Small-pox ...	3	...	4	1	...	...	...	1
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	2,261	2,080	389	299	160	133	63	87
			Dysentery and Diarrhoea ...	58	45	12	10	...	3	3	5
			Respiratory diseases ...	26	18	18	17	16	9	15	9
			Injuries ...	24	...	...	3	1	1	6	2
			All other causes ...	371	148	685	650	203	218	116	118
			Total ...	2,744	2,291	1,109	980	381	364	205	223
26		MULTAN.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	26	18	61	47	31	27	9	5
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	3,091	2,876	1,953	1,982	393	405	233	238
			Dysentery and Diarrhoea ...	90	58	26	11	6	1	4	1
			Respiratory diseases ...	5	4	6	4	3	2	5	4
			Injuries ...	2	5	11	3	9	5	4	4
			All other causes ...	854	753	641	575	208	184	108	130
			Total ...	4,068	3,714	2,698	2,622	650	624	363	382
27	MULTAN—CONCLUDED.	MUZAFFARGARH.	Cholera ...	...	...	...	...	1	...	...	...
			Small-pox ...	9	14	37	41	21	9	3	5
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	2,287	1,955	1,784	1,824	563	475	240	187
			Dysentery and Diarrhoea ...	16	11	10	15	3	3	2	1
			Respiratory diseases ...	7	13	9	5	4	3	1	7
			Injuries ...	1	1	24	27	28	20	18	9
			All other causes ...	670	577	150	127	50	48	20	13
			Total ...	2,990	2,571	2,014	2,039	670	558	284	222
28		DERA GHAZI KHAN.	Cholera ...	...	...	...	...	...	...	...	...
			Small-pox ...	5	...	10	8	7	5	4	3
			Plague ...	...	...	...	...	...	...	...	...
			Fevers ...	1,613	1,207	1,291	1,272	444	340	198	128
			Dysentery and Diarrhoea ...	47	27	24	38	13	7	1	2
			Respiratory diseases ...	38	43	7	9	4	2	1	3
			Injuries ...	2	2	11	14	12	12	8	5
			All other causes ...	143	228	304	255	111	92	22	25
			Total ...	1,848	1,507	1,647	1,596	591	458	234	166
Total for the Province—											
			Cholera ...	11	10	81	63	105	79	103	88
			Small-pox ...	281	234	703	635	369	308	70	71
			Plague ...	92	77	95	86	111	116	116	162
			Fevers ...	46,274	2,021	46,287	46,328	11,350	11,487	5,964	5,971
			Dysentery and Diarrhoea ...	2,233	1,806	1,664	1,410	550	460	396	287
			Respiratory diseases ...	7,229	5,806	3,854	3,555	1,146	907	883	730
			Injuries ...	194	121	528	441	578	332	393	283
			All other causes ...	36,822	33,285	16,352	15,128	3,107	2,502	1,529	1,508
			Total ...	93,136	83,360	69,564	67,646	17,316	16,191	9,454	9,100
Population according to census of 1911 ...				424,654	404,431	997,515	931,872	1,482,324	1,259,701	13,21,272	931,615
Ratio per 1,000 living for the Province—											
			Cholera ...	0.03	0.02	0.08	0.07	0.07	0.06	0.08	0.09
			Small-pox ...	0.66	0.58	0.70	0.68	0.25	0.24	0.05	0.08
			Plague ...	0.22	0.19	0.10	0.09	0.07	0.09	0.09	0.17
			Fevers ...	108.97	103.90	46.40	49.71	7.66	9.12	4.51	6.41
			Dysentery and Diarrhoea ...	5.26	4.47	1.67	1.51	0.37	0.37	0.30	0.31
			Respiratory diseases ...	17.02	14.36	3.86	3.82	0.77	0.72	0.67	0.78
			Injuries ...	.46	0.30	0.53	0.47	0.39	0.26	0.30	0.30
			All other causes ...	86.71	2.30	16.39	16.23	2.10	1.99	1.16	1.62
			Total ...	219.32	206.12	69.74	72.59	11.68	12.85	7.16	9.77

NOTE.—The population of Military Cantonments by different ages cannot be  
 NOTE.—As the correct population of the different age periods according to the census  
 Local Government on the population of the Punjab as constituted prior to the



## No. IV—CONCLUDED.

## DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1916.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	...	2	...	...	...	2	1	...	1	...	7	5	25
...	...	...	...	...	...	...	...	...	...	...	...	7	2	
5	4	1	2	3	3	4	...	...	...	...	...	13	9	
81	42	163	106	114	169	167	191	178	189	777	643	4,353	3,939	
1	4	5	3	9	4	10	6	12	6	40	24	150	110	
17	20	26	31	38	23	22	25	22	18	94	42	294	212	
3	2	8	13	9	5	3	4	14	2	7	6	75	38	
62	75	101	203	107	181	128	67	155	119	296	139	2,224	1,918	
169	147	304	360	280	385	334	295	382	334	1,215	854	7,123	6,233	
...	...	...	1	1	...	1	1	...	...	...	...	2	2	26
2	2	2	4	...	1	2	...	...	...	2	...	135	104	
231	251	429	584	497	600	613	501	565	436	1,260	965	9,265	8,838	
1	7	8	4	3	8	7	5	8	4	18	21	171	120	
4	7	10	7	7	6	8	7	4	4	7	8	59	53	
3	4	16	5	12	7	7	8	8	8	6	1	78	50	
95	93	113	119	109	111	100	110	123	99	318	295	2,669	2,469	
336	364	578	724	629	733	738	632	708	551	1,611	1,290	12,379	11,636	
...	...	2	...	2	1	...	...	...	...	...	...	5	1	27
...	4	3	5	2	3	1	1	...	...	1	...	77	82	
182	163	482	614	613	681	673	578	675	468	1,438	1,081	8,937	8,026	
2	...	5	5	3	...	10	6	7	4	18	5	76	50	
5	1	10	19	15	15	24	7	19	9	33	20	127	99	
7	5	24	12	26	7	10	9	4	8	7	8	149	106	
14	28	21	89	21	70	18	24	23	9	39	13	1,026	998	
210	201	547	744	682	777	736	625	728	498	1,536	1,127	10,397	9,362	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	...	...	...	...	...	...	...	...	...	26	16	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
84	106	279	376	341	388	393	351	409	323	775	672	5,827	5,163	
5	1	3	5	9	10	16	7	15	7	55	25	188	129	
1	7	12	16	12	9	18	6	15	12	43	28	151	135	
8	3	19	8	21	12	17	6	7	3	11	6	116	71	
25	22	26	77	29	73	37	27	25	16	51	37	773	852	
123	139	339	482	412	492	481	397	471	361	935	768	7,081	6,366	
124	87	163	115	141	105	91	80	56	50	55	44	930	721	
37	40	30	38	22	22	10	4	3	2	6	1	1,531	1,355	
170	138	302	322	241	254	197	173	156	160	159	151	1,639	1,639	
4,849	4,859	9,775	11,881	10,422	11,392	11,408	10,192	12,756	9,662	34,468	28,657	193,553	182,450	
323	279	508	401	520	435	601	388	627	458	1,264	941	8,686	6,865	
969	815	1,946	1,907	2,096	1,811	2,173	1,607	2,249	1,832	4,847	3,647	27,392	22,617	
284	204	550	363	519	294	433	276	357	240	486	299	4,322	2,853	
1,179	1,268	1,967	2,529	1,783	2,126	2,001	1,503	1,960	1,572	5,220	3,776	71,920	65,197	
7,935	7,690	15,241	17,556	15,744	16,439	16,914	14,223	18,164	13,976	46,505	37,516	309,973	283,697	
994,090	726,853	1,885,914	1,581,886	1,446,929	1,197,335	1,065,657	894,099	711,241	544,726	662,471	510,371	10,608,101	8,729,045	
0·12	0·12	0·09	0·07	0·10	0·09	0·09	0·09	0·08	0·09	0·08	0·09	0·09	0·08	
0·04	0·06	0·02	0·02	0·02	0·02	0·01	0·004	0·004	0·003	0·01	0·001	0·14	0·16	
0·17	0·19	0·16	0·20	0·17	0·21	0·18	0·19	0·22	0·29	0·24	0·30	0·15	0·19	
4·88	6·68	5·18	7·51	7·20	9·51	10·71	11·40	17·93	17·74	52·03	56·15	18·24	20·90	
0·32	0·38	0·27	0·25	0·36	0·36	0·56	0·43	0·88	0·84	1·91	1·84	0·82	0·79	
0·97	1·12	1·03	1·21	1·45	1·51	2·04	1·80	3·16	3·36	7·32	7·15	2·58	2·59	
0·29	0·28	0·29	0·23	0·36	0·25	0·41	0·31	0·50	0·44	0·73	0·59	0·41	0·33	
1·19	1·74	1·04	1·60	1·23	1·78	1·88	1·68	2·76	2·89	7·88	7·40	6·78	7·47	
7·98	10·58	8·08	11·10	10·88	13·73	15·87	15·91	25·14	25·66	70·20	73·51	29·22	32·50	

excluded, as it is not shown separately in the census returns.  
of 1911 of the Punjab Province as at present constituted is not available, the ratios shown in columns 5 to 14 are calculated under the orders of the separation of the (new) Delhi Province,—vide Punjab Government notification No. 2943-S., dated 1st October 1912.



## ANNUAL FORM No. V.

## DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1916.

1	2	3					4					5					6
		POPULATION ACCORDING TO CENSUS OF 1911.					NUMBER OF DEATHS REGISTERED.					RATIO OF DEATHS PER 1,000 OF POPULATION.					
	DISTRICTS.	Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Indian Christians.	Other classes.	Total.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	AMBALA DIVISION.																
1	Hissar ...	218,600	585,995	79	215	804,889	6,575	19,018	3	...	25,596	30·08	32·45	37·97	...	31·80	1
2	Rohtak ...	113,493	600,168	1,136	37	714,834	3,160	15,676	2	...	18,838	27·84	26·12	1·76	...	26·35	2
3	Gurgaon ...	235,653	492,684	687	143	729,167	6,318	13,733	2	...	20,053	26·81	27·87	2·91	...	27·50	3
4	Karnal ...	224,920	573,947	836	84	799,787	6,829	17,041	5	...	23,875	30·36	29·69	5·98	...	29·85	4
5	Ambala ...	188,252	443,202	745	354	632,553	6,009	14,405	10	1	20,425	31·92	32·50	13·42	2·82	32·29	5
6	Simla ...	4,775	27,093	533	2,569	34,970	132	712	5	...	849	27·64	26·28	9·38	...	24·40	6
	JULLUNDUR DIVISION.																
7	Kangra ...	38,770	723,570	221	4,125	766,686	1,398	25,539	2	...	26,939	36·06	35·30	9·05	...	35·14	7
8	Hoshiarpur ...	281,805	633,786	2,954	24	918,569	7,487	18,367	12	...	25,866	26·57	28·98	4·06	...	28·16	8
9	Jullundur ...	352,329	434,503	1,107	17	787,956	9,696	11,138	2	10	20,846	27·52	25·63	1·81	588·24	26·46	9
10	Ludhiana ...	176,043	340,261	731	157	517,192	4,935	9,963	7	...	15,905	28·03	29·28	9·58	..	28·82	10
11	Ferozepore ...	408,380	524,056	915	148	933,499	14,218	17,019	11	...	31,248	34·82	32·48	12·02	...	33·47	11
	LAHORE DIVISION.																
12	Lahore ...	619,735	377,928	15,972	4,107	1,017,742	21,610	9,306	483	...	31,399	34·81	24·62	30·24	.	30·85	12
13	Amritsar ...	408,571	466,202	4,189	349	879,311	13,615	14,977	105	14	28,711	33·32	32·13	25·07	40·11	32·65	13
14	Gurdaspur ...	407,701	401,628	23,068	164	832,561	13,481	14,068	622	...	28,171	33·07	35·03	26·96	...	33·84	14
15	Sialkot ...	599,340	317,942	45,727	270	963,279	21,740	9,668	1,903	36	33,347	36·27	30·41	41·62	133·33	34·62	15
16	Gujranwala ...	622,430	284,773	16,117	99	923,419	27,688	7,047	675	200	35,610	44·48	24·75	41·88	?	38·56	16
	RAWALPINDI DIVISION.																
17	Gujrat ...	650,893	94,171	463	107	745,634	20,267	2,628	5	37	22,937	31·14	27·91	10·80	345·79	30·76	17
18	Shshpur ...	572,565	106,156	8,419	226	687,366	16,907	2,375	267	...	19,549	29·53	22·37	31·71	...	28·44	18
19	Jhelum ..	449,553	54,364	151	127	504,195	13,116	1,531	3	...	14,650	29·18	28·16	19·87	...	29·06	19
20	Rawalpindi ...	442,090	64,209	932	411	507,642	14,861	2,159	29	...	17,049	33·62	33·62	31·12	...	33·58	20
21	Attock ...	470,155	45,071	31	29	515,286	14,113	919	...	52	15,084	30·02	20·39	...	?	29·27	21
22	Mianwali ...	299,971	41,238	91	77	341,377	12,208	1,539	...	...	13,747	40·70	37·32	.	...	40·27	22
	MULTAN DIVISION.																
23	Montgomery...	376,174	127,368	459	114	504,115	9,790	2,978	74	10	12,852	26·03	23·38	161·22	87·72	25·49	23
24	Lyallpur ...	547,837	309,021	31,889	148	888,895	12,784	6,770	988	5	20,547	23·34	21·91	30·98	33·78	23·12	24
25	Jhang ...	422,468	92,857	177	24	515,526	10,963	2,380	3	10	13,356	25·95	25·63	16·95	416·67	25·91	26
26	Multan ...	660,320	140,359	384	312	801,375	19,658	4,352	1	4	24,015	29·77	31·01	2·60	12·82	29·97	25
27	Muzaffargarh	494,915	74,481	40	25	569,461	16,993	2,761	1	4	19,759	34·34	37·07	25·00	160·00	34·70	27
28	Dera Ghazi Khan.	442,234	57,550	25	51	499,860	11,672	1,746	..	29	13,447	26·39	30·34	...	568·63	26·90	28
	Total for the Province.	10,729,972	8,434,563	158,078	14,513	19,337,146	338,223	249,815	5,220	412	593,670	31·52	29·62	33·02	28·39*	30·70	

\*Figures incorrect due to misclassification.



ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL  
CIRCLES) OF THE PUNJAB DURING THE YEAR 1916.



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	7	8	9	10					
No.	A.—RURAL CIRCLES.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AMBALA DIVISION.														
1	Hissar ... ..	725,016	3	68	334	15,087	480	966	4	9	178	62	1	254
2	Rohtak ... ..	654,115	2	22	31	9,408	301	1,020	3	35	233	36	3	310
3	Gurgaon ... ..	675,175	85	11	54	9,037	492	1,212	21	36	300	43	...	400
4	Karnal ... ..	723,742	15	41	161	12,447	204	1,345	2	8	233	65	1	314
5	Ambala ... ..	577,034	53	43	1,377	9,466	399	3,577	...	1	70	21	13	105
6	Simla ... ..	16,036	...	...	...	136	47	96	...	...	5	1	...	6
JULLUNDUR DIVISION.														
7	Kangra ... ..	760,548	12	4	1	17,112	935	2,934	8	4	200	45	7	264
8	Hoshiarpur ... ..	864,823	9	34	16	17,310	34	2,122	7	8	191	36	11	253
9	Jullundur ... ..	691,816	37	74	59	11,347	210	2,111	5	7	191	7	6	216
10	Ludhiana ... ..	448,172	88	43	38	6,132	149	931	21	14	100	6	11	152
11	Ferozepore ... ..	878,765	84	332	9	15,401	620	1,752	8	9	239	19	11	286
LAHORE DIVISION.														
12	Lahore ... ..	758,826	45	590	27	13,277	235	638	8	2	228	42	4	284
13	Amritsar ... ..	711,530	46	253	56	15,005	484	1,206	6	6	198	17	9	236
14	Gurdaspur ... ..	784,343	3	51	173	14,188	1,882	8,641	2	2	166	17	4	191
15	Sialkot ... ..	855,399	111	76	85	18,769	1,258	3,903	1	3	237	47	5	293
16	Gujranwala ... ..	833,879	48	8	55	26,691	141	466	3	2	309	114	1	429
RAWALPINDI DIVISION.														
17	Gujrat ... ..	702,886	73	42	2	14,196	388	1,809	1	1	220	29	1	252
18	Shahpur ... ..	620,940	1	49	2	11,129	227	723	2	...	216	25	1	244
19	Jhelum ... ..	481,307	...	10	5	9,546	155	839	3	1	179	40	5	228
20	Rawalpindi ... ..	459,639	14	3	167	10,186	1,844	971	2	4	184	32	1	223
21	Attock ... ..	496,291	...	11	2	10,442	35	1,252	6	...	159	36	...	201
22	Mianwali ... ..	316,243	12	50	...	10,597	120	181	2	1	111	8	...	122
MULTAN DIVISION.														
23	Montgomery ... ..	479,837	...	171	19	8,874	61	109	...	...	98	48	...	156
24	Lyallpur ... ..	863,900	103	225	6	13,052	348	831	4	4	294	26	3	331
25	Jhang ... ..	475,527	8	7	22	7,819	157	426	...	...	77	21	3	101
26	Multan ... ..	709,294	...	229	...	16,634	51	14	...	...	43	80	...	123
27	Muzaffargarh ... ..	547,005	3	144	...	16,342	74	170	4	2	165	78	1	250
28	Dera Ghazi Khan ... ..	463,304	...	30	...	10,394	177	209	4	6	118	53	...	181
Total of the Rural Circles ...		17,590,392	855	2,621	2,701	350,024	11,558	40,453	127	165	4,947	1,054	102	6,395



## (RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1916.

11	12	13								14		15
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.								FROM ALL CAUSES.		No.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
4,827	22,019	0·004	0·09	0·6	20·81	0·66	1·33	0·35	6·66	30·37	28·62	1
5,724	16,818	0·003	0·03	0·05	14·40	0·46	1·56	0·47	8·75	25·71	33·56	2
7,165	18,453	0·13	0·02	0·08	13·37	0·73	1·80	0·59	10·62	27·34	37·19	3
6,677	21,204	0·02	0·06	0·22	17·20	0·28	1·86	0·43	9·23	29·30	38·84	4
3,686	18,656	0·09	0·07	2·39	16·40	0·69	6·20	0·18	6·30	32·33	36·45	5
142	426	...	...	...	8·48	2·93	5·92	0·37	8·86	26·57	22·20	6
5,496	26,758	0·02	0·01	0·001	22·50	1·23	3·86	0·35	7·23	35·18	29·11	7
4,476	24,254	0·01	0·04	0·02	20·02	0·04	2·45	0·29	5·18	28·05	34·12	8
3,900	17,954	0·05	0·11	0·09	16·40	0·30	3·05	0·31	5·64	25·95	34·67	9
5,095	12,628	0·20	0·10	0·08	13·68	0·33	2·08	0·34	11·37	28·18	33·71	10
10,942	29,426	0·10	0·38	0·01	17·53	0·71	1·99	0·33	12·45	33·49	30·02	11
6,873	22,019	0·06	0·78	0·04	17·49	0·38	0·84	0·37	9·06	29·02	30·74	12
4,940	22,226	0·06	0·36	0·08	21·09	0·68	1·69	0·33	6·94	31·24	39·82	13
1,437	26,566	0·003	0·07	0·22	18·09	2·40	11·02	0·24	1·83	33·87	35·95	14
4,995	29,490	0·13	0·09	0·10	21·94	1·47	4·56	0·34	5·84	34·48	36·91	15
4,654	32,492	0·06	0·01	0·07	31·82	0·17	0·56	0·51	5·54	38·73	35·00	16
4,586	21,348	0·10	0·06	0·002	20·20	0·55	2·57	0·36	6·52	30·37	33·30	17
5,464	17,839	0·001	0·08	0·003	17·64	0·36	1·15	0·39	8·66	28·27	26·02	18
3,019	13,802	...	0·02	0·01	19·83	0·32	1·74	0·47	6·27	28·68	31·56	19
1,575	14,983	0·03	0·01	0·36	22·16	4·01	2·11	0·49	3·43	32·60	36·10	20
2,565	14,508	...	0·02	0·004	21·04	0·07	2·52	0·41	5·17	29·23	30·10	21
1,706	12,788	0·04	0·16	...	33·51	0·38	0·57	0·39	5·39	40·44	25·85	22
2,810	12,190	...	0·36	0·04	18·49	0·13	0·23	0·30	5·86	25·40	20·15	23
5,231	20,127	0·12	0·26	0·01	15·11	0·40	0·96	0·38	6·06	23·30	25·30	24
3,445	11,986	0·02	0·01	0·05	16·44	0·33	0·90	0·21	7·25	25·21	24·76	25
3,718	20,769	...	0·32	...	23·45	0·07	0·02	0·17	5·24	29·28	22·76	26
1,675	18,658	0·01	0·26	...	29·88	0·14	0·31	0·46	3·06	34·11	25·20	27
1,181	12,172	...	0·06	...	22·43	0·38	0·45	0·39	2·55	26·27	20·42	28
117,955	532,562	0·05	0·15	0·15	19·90	0·66	2·30	0·36	6·71	30·28	31·43	



## ANNUAL FORM

## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
No.	B.—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake bite and killed by wild beasts.	Rabies.	Total.
1	2	3	4	5	6	7	8	9	Males.	Females.	12	13	14	15
HISSAR DISTRICT.														
1	Hissar ... ..	17,162	...	4	...	222	35	106	...	...	5	1	...	6
2	Hansi ... ..	14,576	13	...	...	119	67	59	...	...	2	...	...	2
3	Bhiwani ... ..	30,100	...	...	1	450	148	177	...	...	12	1	...	13
4	Sirsa ... ..	14,629	...	1	...	233	44	70	...	...	1	1	...	2
5	Pattehabad ... ..	2,406	...	...	...	32	1	3	...	...	...	...	...	...
ROHTAK DISTRICT.														
6	Rohtak ... ..	19,862	20	1	...	265	29	54	...	...	8	1	...	9
7	Jhajjar ... ..	10,617	9	...	...	107	74	57	...	...	4	...	...	4
8	Leri ... ..	7,793	...	...	...	167	41	11	...	1	1	...	...	2
9	Gohana ... ..	5,438	...	1	...	52	5	21	...	...	3	...	...	3
10	Rahadurgarh ... ..	4,990	6	1	...	55	13	25	...	2	1	...	...	3
11	Sonepat ... ..	12,014	...	...	...	126	24	20	...	...	2	1	...	3
GURGAON DISTRICT.														
12	Rewari ... ..	24,780	15	...	...	17	47	145	...	1	...	...	...	1
13	Palwal ... ..	9,485	...	...	...	94	32	38	...	...	3	...	...	3
14	Ferozpur ... ..	5,719	...	1	...	80	10	11	...	...	1	...	...	1
15	Hodal ... ..	5,468	...	...	...	91	8	4	...	...	...	1	...	1
16	Ballabgarh ... ..	4,053	...	1	...	45	5	7	...	...	1	...	...	1
17	Faridabad ... ..	4,487	...	...	...	68	12	12	...	...	2	...	...	2
KARNAL DISTRICT.														
18	Karnal ... ..	21,018	14	...	...	375	71	88	...	...	10	...	...	10
19	Kaithal ... ..	12,912	...	1	...	199	23	48	...	...	4	...	...	4
20	Panipat ... ..	26,342	165	2	3	282	28	132	...	...	9	...	...	9
21	Shahabad ... ..	11,054	3	2	...	69	10	69	...	...	2	...	...	2
22	Thanesar ... ..	4,719	...	...	...	57	23	15	...	...	2	...	...	2
AMBALA DISTRICT.														
23	Ambala ... ..	24,493	5	1	19	274	72	158	...	...	4	1	...	5
24	Jagadhri ... ..	12,045	1	...	3	232	34	47	...	...	2	...	...	2
25	Burya ... ..	4,272	...	...	1	66	7	18	...	...	...	1	...	1
26	Sadhaura ... ..	7,774	...	...	...	56	17	64	...	...	1	...	...	1
27	Rupar ... ..	6,935	...	6	...	73	34	34	...	...	1	...	...	1
SIMLA DISTRICT.														
28	Simla ... ..	18,934	1	...	...	187	10	67	1	...	5	...	...	6
KANGRA DISTRICT.														
29	Kangra ... ..	3,620	...	...	...	33	36	25	...	...	...	1	...	...
30	Dharmasala ... ..	2,518	...	...	...	22	3	15	...	1	1	...	...	2
HOSHIARPUR DISTRICT.														
31	Hoshiarpur ... ..	16,980	...	2	...	199	4	153	1	...	8	...	...	...
32	Khanpur ... ..	2,523	...	...	...	33	...	18	...	...	1	...	...	1
33	Hariana ... ..	5,395	...	...	...	87	1	19	...	...	3	...	...	3
34	Garhdiwala ... ..	3,093	...	...	...	56	4	16	...	...	2	...	...	2
35	Dasuyah ... ..	3,597	...	1	...	64	...	35	...	...	1	...	...	2
36	Tanda Urmar ... ..	7,066	...	...	...	88	2	35	...	...	1	...	1	1
37	Miani ... ..	4,870	...	...	...	51	...	16	...	...	...	...	...	...
38	Mukerian ... ..	2,053	...	...	...	47	3	26	...	...	2	...	...	2
39	Una ... ..	4,178	...	...	...	73	1	14	...	...	...	1	...	1
40	Anandpur ... ..	4,041	...	...	...	53	...	12	...	...	...	...	...	...
JULLUNDUR DISTRICT.														
41	Jullundur ... ..	55,354	24	1	...	649	174	290	...	...	19	2	1	22
42	Kartarpur ... ..	8,631	...	...	...	120	17	48	1	...	...	...	...	4
43	Bungah ... ..	4,702	1	...	...	45	5	12	...	...	...	...	...	...
44	Rahon ... ..	6,292	...	...	...	117	7	25	1	...	...	...	...	1
45	Phillaar ... ..	5,224	4	1	...	96	10	34	...	...	...	...	...	...
46	Nurmahal ... ..	7,178	...	...	...	74	29	68	...	...	5	...	...	5
47	Nakodar ... ..	8,859	...	13	...	121	17	35	...	...	1	...	...	1



## No. VI.

## TOWNS OF THE PUNJAB DURING THE YEAR 1916.

11	12	13										14
RATIO OF DEATHS PER 1,000 OF POPULATION.												
All other causes.	Total deaths from all causes.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diar- rhœa.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		No.
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
413	786	...	0.23	...	12.94	2.04	6.18	0.35	24.06	45.80	33.10	1
319	579	0.89	...	...	8.16	4.60	4.03	0.14	21.89	39.72	36.76	2
780	1,569	...	...	0.03	14.47	4.76	5.69	0.42	25.08	50.45	40.14	3
248	598	...	0.07	...	15.93	3.01	4.79	0.14	16.95	40.88	37.01	4
9	45	...	...	...	13.30	0.42	1.25	...	3.74	18.70	25.60	5
229	607	1.01	0.05	...	13.34	1.46	2.72	0.45	11.53	30.56	37.38	6
189	440	0.85	...	...	10.08	6.97	5.37	0.38	17.80	41.44	35.19	7
94	315	...	...	...	21.42	5.26	1.42	0.26	12.05	40.39	35.57	8
78	160	...	0.18	...	9.56	0.92	3.86	0.55	14.34	29.42	55.57	9
68	171	1.2	0.20	...	11.02	2.61	5.01	0.60	13.63	34.27	41.53	10
154	327	...	...	...	10.49	2.00	1.66	0.25	12.82	27.22	44.25	11
440	665	0.61	...	...	0.69	1.90	5.85	0.04	17.76	26.84	33.04	12
166	333	...	...	...	9.91	3.37	4.01	0.32	17.50	35.11	58.77	13
72	175	...	0.17	...	13.99	1.75	1.92	0.17	12.59	30.60	38.50	14
79	183	...	...	...	16.64	1.46	0.73	0.18	14.45	33.47	53.55	15
24	83	...	0.25	...	11.10	1.23	1.73	0.25	8.92	20.48	43.87	16
64	158	...	...	...	15.15	2.67	2.67	0.45	14.26	35.21	44.44	17
272	830	0.67	...	...	17.84	3.38	4.19	0.48	12.94	39.49	45.56	18
150	425	...	0.08	...	15.41	1.78	3.72	0.31	11.62	32.92	51.38	19
383	1,002	0.76	0.08	0.11	10.71	0.99	5.01	0.34	14.54	33.04	54.40	20
126	281	0.27	0.18	...	6.24	0.90	6.24	0.18	11.40	25.42	43.31	21
86	133	...	...	...	12.08	4.87	3.18	0.42	7.63	23.18	41.11	22
207	741	0.20	0.04	0.78	11.19	2.94	6.45	0.20	8.45	30.25	35.78	23
145	464	0.08	...	0.25	19.26	2.82	3.90	0.17	12.04	38.52	45.56	24
46	139	...	...	0.23	15.45	1.64	4.21	0.23	10.77	32.54	42.23	25
68	206	...	...	...	7.20	2.19	8.23	0.13	8.75	26.50	44.28	26
71	219	...	0.87	...	10.53	4.90	4.90	0.14	10.24	31.58	35.47	27
152	423	0.05	...	...	9.88	0.53	3.54	0.32	8.03	22.34	20.03	23
20	119	...	...	...	10.50	9.94	6.91	...	5.52	32.87	27.57	29
20	62	...	...	...	8.74	1.19	5.96	0.79	7.94	24.32	23.59	30
195	562	...	0.12	...	11.72	0.24	9.01	0.53	11.48	33.10	36.49	31
12	64	...	...	...	13.08	...	7.13	0.40	4.76	25.37	37.37	32
17	127	...	...	...	16.13	0.19	3.52	0.56	3.14	23.54	34.07	33
22	100	...	...	...	18.11	1.29	5.17	0.65	7.11	32.33	33.62	34
44	146	...	0.28	...	17.79	...	9.7	0.56	12.23	40.59	49.60	35
47	173	...	...	...	12.54	0.28	4.99	0.14	6.70	24.66	35.83	36
21	88	...	...	...	10.47	...	3.29	...	4.31	18.07	32.57	37
71	149	...	...	...	22.89	1.46	12.66	0.97	34.58	72.58	56.60	38
28	115	...	...	...	17.47	0.24	3.35	0.24	6.22	27.53	40.35	39
23	88	...	...	...	13.12	...	2.97	...	5.69	21.78	27.22	40
524	1,684	0.43	0.02	...	11.72	3.14	5.24	0.40	9.47	30.42	35.80	41
41	227	...	...	...	13.90	1.97	5.56	0.12	4.75	26.30	42.08	42
40	103	0.22	...	...	9.78	1.09	2.61	...	8.69	22.30	40.11	43
25	175	...	...	...	18.60	1.11	3.97	0.16	3.97	27.81	32.39	44
73	218	0.77	0.19	...	18.38	1.91	6.51	...	13.97	41.73	37.48	45
47	223	...	...	...	10.31	4.04	9.47	0.70	6.55	31.07	33.94	46
75	262	...	1.47	...	13.66	1.92	3.95	0.11	8.47	29.57	39.78	47



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
No.	B.--TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LUDHIANA DISTRICT.														
48	Ludhiana ...	48,152	22	4	...	544	128	185	1	...	6	1	...	8
49	Jagraon ...	15,039	39	...	...	161	42	59	1	1	4	...	...	6
50	Rackot ...	7,510	1	...	...	68	8	24	...	...	1	...	...	1
51	Khanna ...	3,319	1	...	...	34	12	20	1	...	2	...	...	3
FEROZEPUR DISTRICT.														
52	Ferozepore ...	24,678	79	...	...	222	43	103	...	...	10	...	...	10
53	Zira ...	4,878	1	...	...	52	3	6	...	...	1	...	...	1
54	Dharmkot ...	5,859	2	...	...	37	8	30	...	...	4	...	...	4
55	Muktsar ...	8,834	...	...	...	97	12	26	1	...	7	...	...	8
56	Fazilka ...	10,985	...	...	...	223	30	90	...	...	2	...	...	2
LAHORE DISTRICT.														
57	Lahore ...	210,271	46	12	...	4,444	343	997	2	1	171	6	1	181
58	Chunian ...	7,151	...	5	...	148	24	13	1	1	8	1	...	11
59	Khudian ...	2,992	2	3	...	29	...	4	...	...	1	1	...	2
60	Kasur ...	24,783	21	1	37	315	41	105	1	...	23	2	...	26
61	Khem Karn ...	5,732	8	5	...	41	4	31	...	...	4	...	...	4
62	Patti ...	7,987	...	...	...	114	21	27	...	...	1	...	...	...
AMRITSAR DISTRICT.														
63	Amritsar ...	151,339	47	69	...	2,053	273	2,365	2	3	91	1	2	99
64	Majitha ...	5,223	...	2	...	41	14	14	...	...	...	...	...	...
65	Jandiala ...	6,959	...	1	...	122	4	10	...	...	3	...	...	3
66	Tarn Taran ...	4,260	...	3	...	28	19	22	...	...	2	...	...	2
GURDASPUR DISTRICT.														
67	Gurdaspur ...	5,133	...	2	...	56	20	48	...	...	1	...	...	1
68	Dinwagar ...	4,154	...	...	3	74	14	29	...	...	2	...	...	3
69	Lathankot ...	7,007	...	...	20	93	39	100	...	...	2	...	...	2
70	Lathousie ...	938	...	...	...	13	1	9	...	...	...	...	...	...
71	Batala ...	26,470	6	29	...	392	39	228	...	...	11	...	...	11
72	Dera Nanak ...	4,556	...	4	...	48	10	46	...	...	...	1	...	1
SIALKOT DISTRICT.														
73	Sialkot ...	48,595	46	...	...	479	185	422	...	...	22	2	1	25
74	Daska ...	6,046	1	...	...	60	16	40	...	...	2	1	1	4
75	Jamke ...	3,542	...	...	1	42	11	16	...	...	3	...	...	3
76	Pasrur ...	7,564	20	1	...	100	31	55	...	...	7	...	...	7
77	Zaffarwal ...	3,633	3	1	...	37	26	59	...	...	...	...	...	...
78	Narowal ...	4,464	3	...	...	102	14	50	...	...	...	...	...	...
79	Sambarial ...	6,285	...	...	...	65	12	9	...	...	1	...	...	2
80	Sahowala ...	3,558	2	...	...	43	10	26	...	...	4	...	...	4
81	Begowala ...	3,768	...	...	...	205	10	20	...	...	1	...	...	2
82	Bhopalwala ...	3,336	...	...	...	27	7	15	...	...	2	...	...	2
83	Mitranwali ...	3,183	...	...	...	22	13	39	...	...	...	...	...	...
84	Badomali ...	2,815	...	1	...	48	5	5	...	...	1	...	...	2
85	Kalaswala ...	2,915	...	1	...	27	13	34	...	...	...	...	...	...
86	Daud ...	3,481	...	...	...	53	15	12	...	...	...	...	...	...
87	Chawinda ...	4,695	...	...	...	47	14	38	...	...	2	...	...	2
GUJRANWALA DISTRICT.														
88	Gujranwala ...	28,637	83	2	...	727	68	94	2	...	16	1	...	19
89	Wazirabad ...	17,146	3	...	...	434	25	48	...	...	10	1	1	12
90	Eminabad ...	5,526	12	...	...	81	6	36	...	...	4	1	...	5
91	Kila Didar Singh	2,210	...	...	...	98	1	14	...	...	1	...	...	1
92	Akalgarh ...	3,943	...	2	...	28	2	10	...	...	...	...	...	...
93	Ramnagar ...	5,256	...	...	2	127	2	11	...	...	6	...	...	6
94	Sohdara ...	4,666	...	...	...	112	...	9	...	...	1	...	...	1
95	Hafizabad ...	5,742	17	...	...	40	1	17	...	...	4	...	...	4
96	Khanzad Dogran	1,267	...	...	...	15	...	2	...	...	...	...	...	...
97	Pindi Bhattian	3,631	...	...	...	51	1	4	...	...	5	...	...	5
98	Sangla ...	980	1	...	...	14	1	...	...	...	...	...	...	...
99	Sharapur ...	4,482	...	...	...	68	4	8	...	...	4	1	...	5
100	Shahkot ...	1,054	...	...	2	24	...	2	...	...	1	...	...	1



## No. VI—CONTINUED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1916.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
496	1,387	0.51	0.09	...	12.61	2.97	4.29	0.19	11.49	32.14	33.63	48
277	584	2.59	...	...	10.71	2.79	3.92	0.40	18.42	38.83	37.36	49
98	200	0.13	...	...	9.05	1.07	3.20	0.13	13.05	28.63	40.45	50
36	106	0.30	...	...	10.24	3.62	6.03	0.90	10.85	31.94	53.33	51
172	629	3.20	...	...	9.00	1.74	4.17	0.41	6.97	25.49	23.53	52
92	155	0.23	...	...	11.88	0.69	1.37	0.21	21.01	35.10	33.03	53
106	187	0.34	...	...	6.52	1.37	5.12	0.68	18.09	31.92	38.30	54
165	378	...	...	...	10.98	1.36	2.94	0.31	18.68	34.87	31.56	55
198	543	...	...	...	20.30	2.73	8.19	0.18	18.02	49.43	36.45	56
1,645	7,668	0.22	0.03	...	21.13	1.63	4.74	0.86	7.82	36.47	32.66	57
120	327	...	0.70	...	20.70	3.36	1.82	1.54	17.62	45.73	36.61	58
16	56	0.67	1.00	...	9.69	...	0.34	0.67	5.35	18.72	34.49	59
338	874	0.85	0.04	1.09	12.71	1.65	4.24	1.05	13.64	35.27	33.41	60
117	210	1.40	0.87	...	7.15	0.70	5.41	0.70	20.41	36.64	34.51	61
82	245	...	...	...	14.27	2.63	3.38	0.13	10.27	30.67	23.77	62
1,139	6,045	0.31	0.45	...	13.57	1.80	15.63	0.65	7.73	33.94	41.28	63
60	131	...	0.33	...	7.85	2.68	2.63	...	11.49	27.08	39.06	64
44	184	...	0.14	...	17.53	0.57	1.44	0.43	6.32	26.44	38.51	65
51	125	...	0.70	...	6.57	4.46	5.16	0.47	11.97	29.34	30.42	66
49	176	...	0.39	...	10.91	3.90	9.35	0.19	9.55	34.29	34.37	67
45	168	...	...	0.72	17.81	3.37	6.48	0.72	10.83	40.44	45.85	68
77	331	...	...	2.85	13.27	5.57	14.27	0.29	10.99	47.24	34.42	69
...	23	...	...	...	13.86	1.07	9.59	...	...	24.52	27.93	70
83	788	0.23	1.10	...	14.93	1.48	8.63	0.42	3.14	29.81	42.24	71
10	119	...	0.88	...	10.54	2.19	10.10	0.22	2.19	26.12	30.38	72
677	1,834	0.95	...	...	9.86	3.81	8.68	0.51	13.93	37.74	36.69	73
62	183	0.17	...	...	9.92	2.65	6.62	0.63	10.25	30.27	30.30	74
46	119	...	...	0.28	11.86	3.11	4.51	0.85	12.99	32.60	43.70	75
57	271	2.64	0.13	...	13.22	4.00	7.27	0.93	7.54	35.83	38.08	76
15	141	0.83	0.28	...	10.18	7.16	16.24	...	4.13	38.81	31.38	77
39	208	0.67	...	...	22.85	3.14	11.20	...	8.74	46.59	35.23	78
46	134	...	...	...	10.34	1.91	1.43	0.32	7.32	21.32	...	79
27	112	0.56	...	...	12.09	2.81	7.31	1.12	7.59	31.48	...	80
17	254	...	...	...	54.41	2.65	5.31	0.53	4.51	67.41	...	81
31	85	...	...	...	8.09	2.10	4.50	0.60	10.19	25.48	...	82
46	120	...	...	...	6.91	4.08	12.25	...	14.45	37.70	...	83
3	64	...	0.36	...	17.05	1.78	1.78	0.71	1.07	22.74	...	84
15	90	...	0.34	...	9.26	4.46	11.66	...	5.15	30.87	...	85
42	122	...	...	...	15.23	4.31	3.45	...	12.07	35.05	...	86
19	120	...	...	...	10.01	2.98	8.09	0.43	4.05	25.56	...	87
318	1,311	2.90	0.07	...	25.39	2.37	3.28	0.66	11.10	45.78	38.46	88
134	656	0.17	...	...	25.31	1.46	2.00	0.70	7.82	38.26	31.42	89
36	176	2.17	...	...	14.66	1.09	6.51	0.90	6.51	31.85	39.41	90
21	135	...	...	...	44.34	0.45	6.33	0.45	9.00	61.09	33.48	91
8	50	...	0.51	...	7.10	0.51	2.54	...	2.03	12.68	16.33	92
51	199	...	...	0.38	24.16	0.38	2.09	1.14	9.70	37.86	36.72	93
54	176	...	...	...	24.00	...	1.93	0.21	11.57	37.72	37.33	94
27	106	2.96	...	...	6.97	0.17	2.96	0.70	4.70	18.46	27.57	95
6	23	...	...	...	11.84	...	1.58	...	4.74	18.15	22.42	96
27	88	...	...	...	14.05	0.28	1.10	1.38	7.44	24.24	39.05	97
2	18	1.02	...	...	14.29	1.02	...	...	2.04	18.37	39.80	98
52	137	...	...	...	15.17	0.89	1.78	1.12	11.60	30.57	34.32	99
14	43	...	...	1.90	22.17	...	1.90	0.95	13.28	40.80	Not available.	100



## DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
No.	B.—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GUJRAT DISTRICT.														
101	Gujrat ... ..	18,692	27	...	...	353	46	154	...	...	6	1	...	7
102	Jalalpur ... ..	11,615	3	...	1	147	37	66	...	...	2	...	...	2
103	Kunjah ... ..	7,090	...	...	1	105	18	35	...	...	1	...	...	1
104	Dinga ... ..	5,351	...	...	...	48	9	25	...	...	3	2	...	5
SHAHPUR DISTRICT.														
105	Shahpur ... ..	8,739	...	...	...	148	20	26	...	...	1	...	...	1
106	Sahiwal ... ..	7,658	...	...	...	126	14	25	...	...	4	...	...	4
107	Bhera ... ..	15,202	2	2	...	220	82	41	...	...	5	...	1	6
108	Miani ... ..	5,819	...	...	...	163	8	22	...	...	3	1	...	4
109	Khushab ... ..	10,159	...	...	...	90	34	32	...	...	4	...	...	4
110	Sargodha ... ..	8,849	...	...	...	27	4	15	...	...	3	...	...	3
JHELUM DISTRICT.														
111	Jhelum ... ..	12,298	...	7	2	185	32	55	...	...	4	...	...	4
112	Pind Dadan Khan ... ..	10,590	...	7	...	269	41	26	...	...	6	...	...	6
RAWALPINDI DISTRICT.														
113	Rawalpindi ... ..	46,642	5	2	491	551	112	391	3	...	22	1	...	26
114	Murree ... ..	1,361	...	...	...	14	2	6	...	...	1	...	...	1
ATTOCK DISTRICT.														
115	Pindigheb ... ..	9,045	...	...	...	202	11	13	...	...	1	...	...	1
116	Hazro ... ..	9,950	...	...	...	172	7	37	...	...	...	...	...	...
MIANWALI DISTRICT.														
117	Mianwali ... ..	6,224	...	4	...	138	12	16	...	...	1	...	...	1
118	Bhakkar ... ..	5,388	...	3	...	194	6	3	...	...	4	...	...	4
119	Isa Khel ... ..	6,868	...	...	...	123	41	6	...	...	1	...	...	1
120	Kalabag ... ..	6,654	...	3	...	152	51	16	...	...	2	...	...	2
MONTGOMERY DISTRICT.														
121	Montgomery ... ..	8,129	...	1	...	132	3	35	...	...	...	1	...	1
122	Kamalia ... ..	8,237	...	...	...	161	3	4	...	...	1	...	...	1
123	Pakpattan ... ..	7,912	...	2	...	153	5	7	...	...	2	...	...	2
LYALLPUR DISTRICT.														
124	Lyallpur ... ..	19,578	1	7	...	185	30	47	...	...	9	...	...	9
125	Gojra ... ..	5,417	...	...	...	11	...	...	...	...	2	...	...	2
JHANG DISTRICT.														
126	Jhang-Maghiana ... ..	25,914	1	2	...	346	80	48	3	...	6	...	...	9
127	Chiniot ... ..	14,085	3	...	...	127	23	32	...	...	2	1	...	3
MULTAN DISTRICT.														
128	Multan ... ..	85,747	4	6	...	1,353	229	92	...	...	4	...	...	4
129	Shujabad ... ..	6,334	...	4	...	116	11	6	...	...	1	...	...	1
MUZAFFARGARH DISTRICT.														
130	Muzaffargarh ... ..	4,119	2	1	...	78	4	16	...	...	2	...	...	2
131	Khangarh ... ..	3,349	...	9	...	91	19	19	...	...	...	...	...	...
132	Alipur ... ..	3,312	...	5	...	73	8	9	...	...	1	...	...	1
133	Leiah ... ..	8,173	1	...	...	208	20	10	...	...	1	1	...	2
134	Karor ... ..	3,503	...	...	...	171	1	2	...	...	...	...	...	...
DERA GHAZI KHAN DISTRICT.														
135	Dera Ghazi Khan ... ..	16,853	...	10	...	229	60	30	...	...	2	...	...	2
136	Jampur ... ..	6,517	...	...	...	91	41	14	1	...	1	...	...	2
137	Dajal ... ..	6,893	...	...	...	163	28	19	...	...	1	...	...	1
138	Rajanpur ... ..	3,704	...	2	...	58	7	7	...	...	1	...	...	1
139	Kot Mithan ... ..	2,589	...	...	...	55	4	7	...	...	...	...	...	...
Total		1,746,754	796	265	577	25,979	3,993	9,556	23	11	694	43	9	780
Total of the Province		19,337,146	1,651	2,886	3,278	376,003	15,551	50,009	150	176	5,641	1,097	111	7,175



## No. VI—CONCLUDED.

## TOWNS OF THE PUNJAB DURING THE YEAR 1916.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
243	835	1.44	...	...	18.89	2.46	8.24	0.37	13.27	44.67	34.68	101
120	376	0.26	...	0.09	12.66	3.19	5.68	0.17	10.33	32.37	32.80	102
98	253	...	...	0.14	14.81	2.54	4.94	0.14	13.82	36.39	34.16	103
33	120	...	...	...	8.97	1.63	4.67	0.93	6.17	22.43	26.69	104
91	286	...	...	...	16.94	2.29	2.98	0.11	10.41	32.73	20.28	105
77	246	...	...	...	16.45	1.83	3.26	0.52	10.05	32.12	31.10	106
197	500	0.13	0.13	...	14.47	2.10	2.70	0.39	12.96	32.89	35.31	107
73	270	...	...	...	28.01	1.37	3.78	0.69	12.55	46.40	36.57	108
175	335	...	...	...	8.86	3.35	3.15	0.39	17.23	32.98	38.23	109
24	73	...	...	...	3.05	0.45	1.70	0.34	2.71	8.25	not available.	110
130	415	...	0.57	0.16	15.04	2.60	4.47	0.33	10.57	33.75	30.95	111
84	433	...	0.66	...	25.40	3.87	2.46	0.57	7.93	40.89	35.24	112
459	2,037	0.11	0.04	10.53	11.81	2.40	8.38	0.56	9.84	43.67	39.72	113
6	29	...	...	...	10.29	1.47	4.41	0.73	4.41	21.31	17.62	114
70	297	...	...	...	22.33	1.22	1.44	0.11	7.74	32.84	32.85	115
63	279	...	...	...	17.29	0.70	3.72	...	6.33	28.04	26.33	116
42	213	...	0.64	...	22.17	1.93	2.57	0.16	6.75	34.22	23.39	117
42	252	...	0.56	...	36.01	1.11	0.56	0.74	7.80	46.77	35.71	118
33	204	...	...	...	17.91	5.97	0.87	0.15	4.80	29.70	24.49	119
66	290	...	0.45	...	22.84	7.66	2.40	0.30	9.92	43.58	34.20	120
31	203	...	0.12	...	16.24	0.37	4.31	0.12	3.81	24.97	19.44	121
68	237	...	...	...	19.55	0.36	0.49	0.12	8.26	28.77	36.25	122
53	222	...	0.25	...	19.34	0.63	0.88	0.25	6.70	28.06	31.29	123
124	403	0.05	0.36	...	9.45	1.53	2.40	0.46	6.33	20.58	13.74	124
4	17	...	...	...	2.03	...	...	0.37	0.74	3.14	Not available.	125
402	888	0.04	0.08	...	13.35	3.09	1.85	0.35	15.51	34.27	36.34	126
294	482	0.21	...	...	9.02	1.63	2.27	0.21	20.87	34.22	43.89	127
1,331	3,019	0.05	0.07	...	15.78	2.67	1.07	0.05	15.52	35.21	31.65	123
89	227	...	0.63	...	18.31	1.74	0.95	0.16	14.05	35.84	34.51	129
29	132	0.49	0.24	...	18.94	0.97	3.88	0.49	7.04	32.05	27.39	130
28	166	...	2.69	...	27.17	5.67	5.67	...	8.36	49.57	39.89	131
49	145	...	1.51	...	22.04	2.42	2.72	0.30	14.79	43.78	35.87	132
182	423	0.12	...	...	25.45	2.45	1.22	0.24	22.27	51.76	29.27	133
61	235	...	...	...	48.82	0.29	0.57	...	17.41	67.09	37.91	134
180	511	...	0.59	...	13.59	3.56	1.78	0.12	10.68	30.32	19.13	135
100	248	...	...	...	13.96	6.29	2.15	0.31	15.34	38.05	25.72	136
107	318	...	...	...	23.65	4.06	2.76	0.15	15.52	46.13	29.51	137
36	111	...	0.54	...	15.66	1.89	1.89	0.27	9.72	29.97	33.37	138
21	87	...	...	...	21.24	1.54	2.70	...	8.11	33.60	32.83	139
19,162	61,103	0.46	0.15	0.33	14.87	2.29	5.47	0.45	10.97	34.98	34.86	
137,117	593,670	0.09	0.15	0.17	19.44	0.80	2.59	0.37	7.09	30.70	31.74	



## APPENDIX TO ANNUAL FORM No. VI B.

BIRTHS AND DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB  
DURING THE YEAR 1916.

No.	CANTONMENTS.	Population according to the census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES					All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.	Total births registered during the year.	Ratio of births per 1,000 of population.	No.
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Total.						
									Males.	Females.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Ambala ...	54,223	...	1	12	511	33	142	...	2	9	...	11	569	1,279	24	1,441	27	1
2	Kasauli ...	3,194	..	...	...	44	4	...	...	...	...	9	9	27	84	26	81	25	2
3	Dagshai ...	2,032	...	...	...	15	...	...	...	...	...	..	...	28	43	21	34	17	3
4	Sabathu ...	1,847	...	...	...	26	...	...	...	...	...	1	1	5	32	17	38	21	4
5	Jatogh ...	471	...	...	...	1	...	...	...	...	...	...	...	9	10	21	8	17	5
6	Dharmsala ...	3,700	...	...	...	25	3	...	...	...	...	...	...	36	64	17	111	30	6
7	Jullundur ...	13,964	1	...	...	80	4	34	...	...	3	...	3	64	186	13	158	11	7
8	Ferozepore ...	26,153	...	...	...	314	35	69	...	...	3	...	3	220	641	25	843	32	8
9	LaLore ...	18,416	3	...	...	193	13	91	...	..	1	...	1	88	389	21	335	18	9
10	Amritsar ...	1,417	...	...	..	8	...	4	...	...	...	...	...	10	22	16	26	18	10
11	Dalhousie ...	644	...	...	...	7	...	1	...	...	...	...	...	7	15	23	12	19	11
12	Bakloh ...	3,566	...	...	...	16	2	...	...	...	...	...	...	7	25	7	50	14	12
13	Sialkot ...	16,274	33	...	...	110	34	81	...	...	1	...	1	67	326	20	265	16	13
14	Jhelum ...	7,380	1	...	...	4	...	...	1	...	...	...	1	4	10	1	4	1	14
15	Rawalpindi ...	39,841	3	...	35	354	13	...	...	...	1	...	1	68	474	12	439	11	15
16	Cambeilpur ...	3,357	...	...	...	24	...	...	...	...	1	...	1	12	37	11	52	15	16
17	Murree ...	344	1	...	...	6	...	...	...	...	1	...	1	21	29	84	48	140	17
18	Attock ...	630	...	...	...	2	...	...	...	...	...	...	...	...	2	3	...	...	18
19	Multan ...	13,496	...	...	...	63	1	12	...	...	1	...	1	51	123	9	133	10	19
Total ...		210,954	42	1	47	1,803	142	434	1	2	21	10	34	1,293	3,796	18	4,078	19	



## ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS OF THE PUNJAB  
DURING EACH MONTH OF THE YEAR 1916.

1	2	3	4	5										6			7			8	9				
		CIRCLES OF REGISTRA- TION.	VILLAGES.	MONTHS.										TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1 000 for pre vious five years.					
No.	DISTRICTS.	Number in each district.	Number from which deaths from cholera were report- ed.	Number in each district.	Number from which deaths from cholera were report- ed.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Fema'les.	Total.	Males.	Females.	Total.	Mean ratio per 1 000 for pre vious five years.	No.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
AMBALA DIVISION.																									
1	Hissar ...	27	2	963	2	..	..	..	..	..	..	2	1	13	..	..	..	9	7	16	0.02	0.02	0.02	0.20	1
2	Rohtak ...	19	4	731	1	..	..	..	..	19	3	..	4	11	..	..	..	17	20	37	0.04	0.06	0.05	0.23	2
3	Gurgaon ...	24	8	1,367	10	..	..	..	..	..	..	1	34	45	3	..	..	45	55	100	0.12	0.16	0.14	0.21	3
4	Karna ...	25	6	1,382	8	..	..	..	..	4	..	1	174	17	1	..	..	98	99	197	0.22	0.27	0.25	0.28	4
5	Ambala ...	19	9	1,715	15	..	..	..	..	..	2	34	22	1	..	..	..	46	13	59	0.18	0.05	0.09	0.11	5
6	Simla ...	3	1	23	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	0.05	..	0.03	0.06	6
JULLUNDUR DIVISION.																									
7	Kangra ...	15	2	713	3	..	..	..	..	..	1	..	11	..	..	..	..	10	2	12	0.03	0.01	0.02	0.30	7
8	Hoshiarpur ...	23	2	2,108	4	..	..	..	3	..	..	..	..	6	..	..	..	6	3	9	0.01	0.01	0.01	0.13	8
9	Jullundur ...	17	7	1,215	9	..	..	..	..	..	5	28	16	17	..	..	..	37	29	66	0.08	0.08	0.08	0.22	9
10	Ludhiana ...	14	11	828	20	..	..	..	..	..	5	19	43	83	1	..	..	96	55	151	0.33	0.25	0.29	0.35	10
11	Ferozepore ...	24	10	1,500	32	..	..	..	..	1	..	36	114	15	..	..	..	94	72	166	0.18	0.17	0.18	0.74	11
LAHORE DIVISION.																									
12	Lahore ...	28	9	1,194	14	..	..	1	5	3	1	..	21	75	16	..	..	74	48	122	0.13	0.11	0.12	1.36	12
13	Amritsar ...	15	6	1,039	9	..	..	..	1	..	7	14	19	42	10	..	..	55	38	93	0.11	0.10	0.11	0.61	13
14	Gurdaspur ...	22	2	2,238	1	..	..	..	..	..	..	1	3	5	..	..	..	5	4	9	0.01	0.01	0.02	0.11	14
15	Sialkot ...	30	13	2,349	16	..	..	..	..	..	..	1	18	102	65	..	..	111	75	186	0.21	0.17	0.19	0.42	15
16	Gujranwala ...	30	13	1,736	12	..	..	..	2	..	2	5	98	33	19	..	..	93	71	164	0.18	0.18	0.18	0.19	16
RAWALPINDI DIVISION.																									
17	Gujrat ...	15	6	1,326	6	..	..	..	..	..	1	3	17	59	23	..	..	50	53	103	0.12	0.15	0.14	0.49	17
18	Shahpur ...	23	2	1,054	1	..	..	..	..	..	..	1	2	..	..	..	..	1	2	3	0.002	0.01	0.004	0.07	18
19	Jhelum ...	14	..	898	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.04	19
20	Rawalpindi ...	14	4	1,177	3	..	..	..	..	1	..	..	..	16	2	..	..	8	11	19	0.03	0.05	0.04	0.10	20
21	Attock ...	13	..	628	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.13	21
22	Mianwali ...	15	1	396	1	..	..	..	..	..	..	..	6	6	..	..	..	5	7	12	0.03	0.04	0.04	0.10	22
MULTAN DIVISION																									
23	Montgomery...	21	..	1,348	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.25	23
24	Lyallpur ...	20	10	1,277	30	..	..	..	..	4	6	17	55	22	..	..	..	55	49	104	0.11	0.13	0.12	0.19	24
25	Jhang ...	13	4	955	3	..	..	..	..	3	..	3	6	..	..	..	..	7	5	12	0.03	0.02	0.02	0.01	25
26	Multan ...	20	1	1,353	..	..	..	..	..	1	..	..	1	2	..	..	..	2	2	4	0.004	0.01	0.004	0.05	26
27	Muzaffargarh	23	3	850	1	..	..	..	3	2	..	..	..	1	..	..	..	5	1	6	0.02	0.003	0.01	0.01	27
28	Dera Ghazi Khan.	23	..	707	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.09	28
Total for the Province.		549	136	33,110	201	..	..	1	14	39	33	188	665	576	140	..	..	930	721	1,651	0.09	0.08	0.09	0.30	



DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1	2		3		4		5						
No.	DISTRICTS.		CIRCLES OF REGIS- TRATION.		VILLAGES.		MONTHS.						
			Number in each dis- trict.	Number from which deaths from small pox were reported.	Number in each dis- trict.	Number from which deaths from small- pox were reported.	January.	February.	March.	April.	May.	June.	July.
1	2		3	4	5	6	7	8	9	10	11	12	13
AMBALA DIVISION.													
1	Hissar	...	27	7	963	66	7	13	18	35	..	...	..
2	Rohtak	...	19	9	731	15	1	1	...	2	5	5	4
3	Gurgaon	...	24	7	1,367	9	...	...	1	...	1	3	1
4	Karnal	...	25	12	1,382	35	3	1	3	6	12	9	...
5	Ambala	...	19	13	1,715	24	1	3	1	9	2	14	8
6	Simla	...	3	..	23	...	...	...	...	...	...	...	...
JULLUNDUR DIVISION.													
7	Kangra	...	15	2	713	3	...	1	1	1	...	1	...
8	Hoshiarpur	...	23	9	2,108	30	1	5	10	16	...	5	...
9	Jullundur	...	17	10	1,215	33	1	3	5	8	14	16	16
10	Ludhiana	...	14	9	858	31	2	5	13	17	1	5	...
11	Ferozepore	...	24	10	1,500	167	26	25	90	72	34	19	15
LAHORE DIVISION.													
12	Labore	...	28	26	1,194	278	15	10	40	77	130	114	71
13	Amritsar	...	15	14	1,039	113	4	13	22	45	67	51	44
14	Gurdaspur	...	22	12	2,238	27	9	6	8	14	20	15	7
15	Sialkot	...	30	17	2,349	47	1	3	11	19	26	12	2
16	Gujranwala	...	30	7	1,736	5	1	2	3	2	1	3	...
RAWALPINDI DIVISION.													
17	Gujrat	...	15	9	1,326	20	3	1	4	10	8	6	5
18	Shahpur	...	23	11	1,054	21	6	6	9	16	13	...	...
19	Jhelum	...	14	5	898	6	1	2	3	7	4	5	2
20	Rawalpindi	...	14	4	1,177	3	...	...	...	1	2	2	...
21	Attock	...	13	6	628	9	...	...	...	2	1	2	2
22	Mianwali	...	15	12	396	27	...	2	1	15	6	14	12
MULTAN DIVISION.													
23	Montgomery	...	21	7	1,348	42	3	7	19	19	34	41	15
24	Lyallpur	...	20	18	1,277	163	4	4	8	19	37	46	42
25	Jhang	...	13	2	955	4	...	...	...	3	1	...	2
26	Multan	...	20	16	1,353	88	5	5	14	53	61	36	41
27	Muzaffargarh	...	23	17	860	69	3	6	8	18	28	40	27
28	Dera Ghazi Khan	...	23	13	707	20	1	6	4	3	7	9	12
Total for the Province			549	284	33,110	1,355	98	130	296	496	515	473	328



## No. VIII.

## OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1916.

					6			7		8			9	10
					TOTAL.			NUMBER OF DEATHS AMONG CHILDREN.		RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
August.	September.	October.	November.	December.	Males.	Females.	Total.	Under one year.	Over one year and under ten years.	Males.	Females.	Total.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
...	...	...	...	...	42	31	73	13	52	0.10	0.08	0.09	0.88	1
2	4	1	...	...	11	14	25	4	19	0.03	0.04	0.03	0.11	2
5	1	1	...	...	6	7	13	6	7	0.02	0.02	0.02	0.45	3
2	4	4	1	1	25	21	46	15	24	0.06	0.06	0.06	0.27	4
3	2	3	3	1	25	25	50	8	30	0.07	0.09	0.08	0.65	5
...	...	...	...	...	...	...	...	...	...	...	...	...	0.19	6
...	...	...	...	...	3	1	4	...	...	0.01	0.002	0.01	0.06	7
...	...	...	...	...	24	13	37	7	27	0.05	0.03	0.04	0.51	8
7	11	6	2	...	51	38	89	27	46	0.12	0.11	0.11	0.85	9
...	...	...	...	4	26	21	47	16	25	0.09	0.09	0.09	0.94	10
13	11	9	5	6	176	156	332	45	224	0.34	0.33	0.36	1.84	11
52	44	37	16	10	318	298	616	121	443	0.55	0.68	0.61	1.54	12
20	22	27	5	8	179	149	328	56	239	0.36	0.39	0.37	0.75	13
...	...	3	2	2	38	48	86	8	71	0.08	0.13	0.10	0.33	14
3	1	2	...	...	40	40	80	7	68	0.08	0.09	0.08	0.78	15
...	...	...	...	...	4	8	12	1	10	0.01	0.02	0.01	0.45	16
3	1	...	1	...	24	18	42	11	28	0.06	0.05	0.06	1.10	17
...	1	...	...	...	26	25	51	9	40	0.07	0.03	0.07	1.27	18
...	...	...	...	...	13	11	24	3	16	0.05	0.05	0.05	1.03	19
...	...	...	...	...	3	2	5	...	2	0.01	0.01	0.01	0.77	20
2	1	1	...	...	5	6	11	5	4	0.02	0.02	0.02	1.33	21
9	...	...	1	...	24	36	60	9	48	0.13	0.22	0.18	0.38	22
10	8	8	6	4	105	69	174	32	126	0.38	0.30	0.35	1.63	23
33	20	8	5	6	118	114	232	37	157	0.23	0.30	0.26	1.27	24
...	...	...	...	3	7	2	9	3	5	0.03	0.01	0.02	0.84	25
13	1	4	1	5	135	104	239	44	166	0.31	0.28	0.30	0.34	26
9	9	9	1	1	77	82	159	23	108	0.25	0.31	0.28	0.45	27
...	...	...	...	...	26	16	42	5	30	0.10	0.07	0.08	1.07	28
186	141	123	49	51	1,531	1,355	2,886	515	2,015	0.14	0.16	0.15	0.81	



## DEATHS REGISTERED FROM FEVERS IN THE DISTRICTS OF THE

1	2	3		4		5					
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar ...	27	27	963	963	1,613	1,393	1,186	1,290	1,425	1,446
2	Rohtak ...	19	19	731	723	1,016	775	649	690	822	918
3	Gurgaon ...	24	24	1,367	1,255	973	768	581	664	659	603
4	Karnal ...	25	25	1,382	1,301	1,443	1,182	891	906	1,168	1,129
5	Ambala ...	19	19	1,715	1,668	767	739	621	696	748	639
6	Simla ...	3	3	23	17	16	14	18	28	32	24
	JULLUNDUR DIVISION.										
7	Kangra ...	15	15	713	590	1,233	1,258	1,256	1,218	1,405	1,369
8	Hoshiarpur ...	23	23	2,108	1,963	1,495	1,290	1,292	1,517	1,641	1,300
9	Jullundur ...	17	17	1,215	902	815	714	737	705	1,014	1,039
10	Ludhiana ...	14	14	858	744	620	481	465	473	649	577
11	Ferozepore ...	24	24	1,500	1,500	1,602	1,482	1,379	1,237	1,522	1,536
	LAHORE DIVISION.										
12	Lahore ...	28	28	1,194	1,117	1,385	1,200	1,234	1,295	1,595	1,442
13	Amritsar ...	15	15	1,039	1,022	1,059	951	1,090	1,262	1,628	1,350
14	Gurdaspur ...	22	22	2,238	1,766	855	789	881	993	1,322	972
15	Sialkot ...	30	30	2,349	2,198	1,069	1,006	921	958	1,112	967
16	Gujranwala ...	30	30	1,736	1,736	1,656	1,368	1,142	994	1,437	1,187
	RAWALPINDI DIVISION.										
17	Gujrat ...	15	15	1,326	1,302	1,312	949	727	679	740	684
18	Shabpur ...	23	23	1,054	1,054	1,163	897	666	652	864	920
19	Jhelum ...	14	14	898	894	989	807	638	516	487	504
20	Rawalpindi ...	14	14	1,177	1,021	1,275	1,005	821	691	690	637
21	Attock ...	13	13	628	687	1,645	1,250	957	805	733	685
22	Mianwali ...	15	15	396	396	1,053	843	617	609	655	705
	MULTAN DIVISION.										
23	Montgomery ...	21	21	1,348	941	1,031	739	588	618	635	666
24	Lyallpur ...	20	20	1,277	1,249	1,084	866	868	973	1,211	1,303
25	Jhang ...	13	13	955	892	850	740	632	468	612	697
26	Multan ...	20	20	1,353	1,353	1,756	1,584	1,456	1,157	1,357	1,227
27	Muzaffargarh ...	23	23	860	739	1,409	1,302	1,171	906	1,077	921
28	Dera Ghazi Khan ...	23	23	707	650	724	707	695	575	576	628
	TOTAL FOR THE PROVINCE ...	549	549	33,110	30,543	31,968	27,099	24,179	23,635	27,816	26,075



PUNJAB DURING EACH MONTH OF THE YEAR 1916.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
1,243	1,199	1,302	1,324	1,510	1,212	8,408	7,735	16,143	19·18	21·11	20·06	17·14	1
743	839	1,022	862	967	877	5,343	4,837	10,180	13·86	14·68	14·24	15·87	2
566	707	986	1,019	997	909	4,887	4,545	9,432	12·56	13·37	12·94	14·70	3
971	986	1,114	1,136	1,200	1,303	6,995	6,434	13,429	15·98	17·77	16·79	19·43	4
700	708	1,032	1,229	1,084	1,204	5,112	5,055	10,167	14·30	18·38	16·07	18·81	5
34	25	51	33	29	19	166	157	323	7·54	12·12	9·23	8·43	6
1,176	1,635	2,190	1,831	1,399	1,202	8,459	8,713	17,172	21·23	23·66	22·40	17·39	7
1,269	1,473	1,869	1,839	1,534	1,542	9,199	8,862	18,061	18·34	21·25	19·66	18·19	8
1,117	1,315	1,377	1,268	1,233	1,175	6,178	6,391	12,569	14·02	18·31	15·95	13·80	9
546	560	660	677	639	592	3,482	3,457	6,939	11·86	15·46	13·42	11·80	10
1,255	1,061	1,144	1,280	1,333	1,201	8,495	7,537	16,032	16·31	18·27	17·17	12·25	11
1,317	1,270	1,747	2,029	2,086	1,768	9,693	675	18,368	16·67	19·89	18·05	15·18	12
1,202	1,338	1,914	1,834	1,975	1,646	8,949	8,300	17,249	18·06	21·68	19·68	16·75	13
853	1,067	1,733	2,056	1,947	1,396	7,592	7,272	14,864	16·29	19·84	17·85	13·33	14
993	1,209	2,276	3 771	3,482	2,362	10,264	9,862	20,126	19·34	22·80	20·89	14·27	15
1,246	1,369	2,239	5,461	5,925	4,486	14,809	13,701	28,510	28·57	33·82	30·87	17·44	16
724	825	1,503	2,589	2,322	1,795	7,603	7,246	14,849	18·98	21·00	19·91	13·34	17
678	666	933	1,544	1,682	1,238	6,085	5,818	11,903	16·15	18·74	17·32	12·42	18
508	522	949	1,542	1,486	1,052	5,073	4,927	10,000	19·35	20·36	19·83	15·53	19
531	559	981	1,148	1,214	1,199	5,605	5,146	10,751	20·94	21·45	21·18	19·04	20
661	617	682	961	891	929	5,781	5,035	10,816	21·38	20·56	20·99	18·76	21
612	532	790	1,477	1,809	1,502	5,545	5,659	11,204	30·82	35·04	32·82	19·82	22
587	584	754	819	1,222	1,077	4,794	4,526	9,320	17·36	19·85	18·49	13·87	23
1,114	1,003	1,114	1,311	1,238	1,163	6,654	6,594	13,248	13·21	17·12	14·90	12·90	24
578	545	614	729	877	950	4,353	3,939	8,292	15·71	16·52	16·08	14·16	25
978	886	1,005	1,607	2,508	2,582	9,265	8,838	18,103	21·28	24·15	22·59	17·00	26
687	577	958	2,203	3,091	2,601	8,937	8,026	16,963	28·98	30·74	29·79	21·44	27
594	506	761	1,537	2,140	1,547	5,827	5,163	10,990	21·39	22·70	21·99	16·47	28
23,483	24,583	33,700	45,116	47,820	40,529	193,553	182,450	376,003	18·24	20·90	19·44	15·79	



## DEATHS REGISTERED FROM DYSENTERY AND DIARRHŒA IN THE

1	2	3		4		5					
Serial No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar ...	27	25	963	204	33	20	25	35	43	32
2	Rohtak...	19	19	731	212	13	8	6	13	29	20
3	Gurgaon ...	24	24	1,367	437	27	24	25	36	29	23
4	Karnal ...	25	25	1,382	158	23	13	16	11	46	21
5	Ambala...	19	19	1,715	338	20	15	21	36	37	36
6	Simla ...	3	3	23	22	3	...	8	5	7	6
	JULLUNDUR DIVISION.										
7	Kangra ...	15	15	713	578	38	32	42	51	88	81
8	Hoshiarpur ...	23	19	2,108	31	3	3	5	6	4	5
9	Jullundur ...	17	16	1,215	111	18	13	14	45	73	26
10	Ludhiana ...	14	14	858	89	19	14	9	26	32	22
11	Ferozepore ...	24	24	1,500	267	21	20	16	34	59	43
	LAHORE DIVISION.										
12	Lahore ...	28	26	1,194	203	51	27	53	58	76	50
13	Amritsar ...	15	15	1,039	217	23	23	34	50	89	56
14	Gurdaspur ...	22	22	2,238	477	41	39	46	256	401	188
15	Sialkot ...	30	30	2,349	597	55	33	42	102	141	84
16	Gujranwala ...	30	23	1,736	131	14	6	19	18	32	17
	RAWALPINDI DIVISION.										
17	Gujrat ...	15	15	1,326	216	29	23	8	34	48	23
18	Shahpur ...	23	23	1,054	187	14	20	16	30	35	31
19	Jhelum ...	14	14	898	104	3	4	15	21	22	19
20	Rawalpindi ...	14	14	1,177	283	195	163	127	119	138	128
21	Attock ...	13	10	628	18	3	2	2	1	5	3
22	Mianwali ...	15	15	396	62	16	7	9	20	19	21
	MULTAN DIVISION.										
23	Montgomery ...	21	7	1,348	25	4	1	5	4	3	1
24	Lyalpur ...	20	19	1,277	265	9	9	23	37	33	39
25	Jhang ...	13	13	955	95	29	30	11	16	22	17
26	Multan ...	20	17	1,353	37	22	18	14	22	21	12
27	Muzaffargarh ...	23	19	860	51	4	3	1	3	8	2
28	Dera Ghazi Khan ..	23	19	707	151	16	7	14	19	13	19
	Total for the Province ...	549	504	33,110	5,566	746	577	626	1,113	1,553	1,031



No. X.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1916.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
80	124	145	106	73	59	438	337	775	1·00	0·92	0·96	0·49	1
24	64	116	97	51	46	265	222	487	0·69	0·67	0·68	0·37	2
28	96	116	90	69	43	333	273	606	0·86	0·80	0·83	0·79	3
35	46	53	42	38	13	206	151	357	0·47	0·42	0·45	0·51	4
55	92	78	64	60	49	320	243	563	0·90	0·88	0·89	0·75	5
3	7	6	3	6	3	25	32	57	1·14	2·47	1·63	1·54	6
85	153	168	126	44	66	509	465	974	1·28	1·26	1·27	1·19	7
1	4	3	3	3	9	28	21	49	0·06	0·05	0·05	0·06	8
41	74	59	28	57	21	251	218	469	0·57	0·63	0·60	0·51	9
24	70	57	32	23	11	186	153	339	0·63	0·68	0·66	0·44	10
51	108	163	103	54	44	406	310	716	0·78	0·75	0·77	0·37	11
39	72	95	68	79	50	441	277	718	0·76	0·63	0·71	0·61	12
43	78	121	124	97	56	456	338	794	0·92	0·88	0·90	0·96	13
112	152	231	246	201	92	1,063	942	2,005	2·28	2·57	2·41	0·95	14
106	184	270	297	215	111	907	733	1,640	1·71	1·69	1·70	1·02	15
20	52	34	18	22	10	141	111	252	0·27	0·27	0·27	0·26	16
23	60	66	83	69	32	276	222	498	0·69	0·64	0·67	0·40	17
24	36	44	39	28	22	223	116	339	0·59	0·37	0·49	0·30	18
17	24	34	34	20	15	138	90	228	0·53	0·37	0·45	0·39	19
131	155	206	224	208	164	1,055	903	1,958	3·94	3·76	3·86	3·54	20
3	7	14	7	1	5	30	23	53	0·11	0·09	0·10	0·10	21
17	23	18	27	32	21	135	95	230	0·75	0·59	0·67	0·60	22
4	9	7	19	6	a	41	31	72	0·15	0·14	0·14	0·11	23
29	42	51	46	34	26	228	150	378	0·45	0·39	0·43	0·35	24
29	32	28	19	10	17	150	110	260	0·54	0·46	0·50	0·58	25
14	36	36	44	25	27	171	120	291	0·39	0·33	0·36	0·39	26
11	14	16	15	30	8	76	50	126	0·25	0·19	0·22	0·15	27
17	26	40	37	68	41	188	129	317	0·69	0·57	0·63	0·31	28
1,066	1,840	2,265	2,041	1,623	1,070	8,686	6,865	15,551	0·82	0·79	0·80	0·60	



## DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE

1	2	3	4	5							
No.	DISTRICTS.	CIRCLES OF RE- GISTRATION.		VILLAGES.		MONTHS.					
		Number in each dis- trict.	Number from which deaths from respira- tory diseases were reported.	Number in each dis- trict.	Number from which deaths from respira- tory diseases were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar ... ..	27	26	963	290	228	159	130	91	109	76
2	Rohtak ... ..	19	19	731	328	164	114	89	107	104	71
3	Gurgaon ... ..	24	24	1,367	262	214	161	120	110	102	81
4	Karnal ... ..	25	25	1,382	415	204	144	129	140	170	120
5	Ambala ... ..	19	19	1,715	537	538	502	472	247	318	266
6	Simla ... ..	3	3	23	15	11	10	17	10	19	15
JULLUNDUR DIVISION.											
7	Kangra ... ..	15	15	713	668	313	339	334	252	261	209
8	Hoshiarpur ... ..	23	23	2,108	995	282	342	263	222	201	134
9	Jullundur ... ..	17	17	1,215	608	366	379	332	227	331	50
10	Ludhiana ... ..	14	14	858	544	231	106	125	77	100	99
11	Ferozepore ... ..	24	24	1,500	480	244	272	227	172	139	142
LAHORE DIVISION.											
12	Lahore ... ..	28	27	1,194	438	193	185	181	135	157	140
13	Amritsar ... ..	15	15	1,039	618	371	326	269	282	252	262
14	Gurdaspur ... ..	22	22	2,238	702	693	729	647	664	682	637
15	Sialkot ... ..	30	30	2,349	1,121	418	397	335	311	362	288
16	Gujranwala ... ..	30	30	1,736	301	88	71	66	63	55	56
RAWALPINDI DIVISION.											
17	Gujrat ... ..	15	15	1,326	1,022	271	183	182	143	148	132
18	Shahpur ... ..	23	23	1,054	319	153	183	114	49	51	56
19	Jhelum ... ..	14	14	898	403	120	104	84	55	76	78
20	Rawalpindi ... ..	14	14	1,177	507	221	184	116	75	77	73
21	Attock ... ..	13	13	628	209	168	139	104	62	69	54
22	Mianwali ... ..	15	15	396	83	27	23	26	28	13	25
MULTAN DIVISION.											
23	Montgomery ... ..	21	11	1,348	74	40	24	23	7	1	3
24	Lyallpur ... ..	20	19	1,277	613	56	70	88	79	82	75
25	Jhang ... ..	13	13	955	143	160	126	75	34	49	24
26	Multan ... ..	20	9	1,353	11	...	...	...	6	12	1
27	Muzaffargarh ... ..	23	23	860	120	21	14	11	8	10	19
28	Dera Ghazi Khan ... ..	23	20	707	126	24	27	36	24	24	24
TOTAL FOR THE PROVINCE ..		549	522	33,110	11,952	5,819	5,313	4,595	3,680	3,974	3,210



## No. XI.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1916.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for pre- vious five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
85	98	79	61	87	178	748	633	1,381	1·71	1·73	1·72	1·27	1
66	84	89	90	126	104	603	605	1,208	1·56	1·84	1·69	2·16	2
73	88	112	88	137	143	728	701	1,429	1·87	2·06	1·96	2·39	3
132	107	148	118	138	147	853	844	1,697	1·95	2·33	2·12	2·05	4
195	202	237	230	346	345	2,078	1,820	3,898	5·81	6·61	6·16	2·79	5
11	10	12	6	22	19	91	71	162	4·13	5·48	4·75	4·40	6
152	233	216	221	163	281	1,624	1,350	2,974	4·08	3·67	3·88	2·75	7
137	127	161	142	196	259	1,447	1,019	2,466	2·89	2·44	2·68	2·40	8
77	137	162	169	211	182	1,491	1,132	2,623	3·38	3·26	3·33	4·39	9
47	59	74	64	121	116	662	557	1,219	2·26	2·49	2·36	2·55	10
127	111	118	109	157	189	1,145	862	2,007	2·20	2·09	2·15	1·62	11
129	135	140	59	163	198	1,009	806	1,815	1·74	1·85	1·78	1·81	12
263	274	308	327	376	307	1,904	1,713	3,617	3·84	4·46	4·11	3·73	13
576	695	969	959	956	894	5,053	4,048	9,101	10·84	11·05	10·93	10·43	14
327	425	498	529	493	360	2,571	2,172	4,743	4·84	5·02	4·92	4·31	15
52	48	50	43	67	62	418	303	721	0·81	0·75	0·78	0·93	16
140	148	190	190	184	178	1,123	966	2,089	2·80	2·80	2·80	2·85	17
28	37	37	34	54	88	510	374	884	1·35	1·20	1·29	0·93	18
62	71	70	61	58	81	489	431	920	1·86	1·78	1·82	1·75	19
74	84	66	146	97	155	809	559	1,368	3·02	2·33	2·69	1·91	20
50	50	75	102	213	216	695	607	1,302	2·57	2·48	2·53	1·01	21
11	18	8	3	11	29	134	88	222	0·74	0·54	0·65	0·56	22
9	5	4	11	8	20	99	56	155	0·36	0·25	0·31	0·31	23
60	56	68	55	102	87	477	401	878	0·95	1·04	0·99	0·84	24
2	16	5	15	...	...	294	212	506	1·06	0·89	0·98	1·07	25
3	14	13	11	24	28	59	53	112	0·14	0·14	0·14	0·01	26
27	29	17	12	27	31	127	99	226	0·41	0·38	0·40	0·12	27
23	10	21	24	23	26	151	135	286	0·55	0·59	0·57	0·44	28
2,938	3,371	3,947	3,879	4,560	4,723	27,392	22,617	50,009	2·58	2·59	2·59	2·30	



## DEATHS REGISTERED FROM PLAGUE IN THE

1	2	3		4		5					
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar ...	27	4	963	11	33	79	111	87	23	1
2	Rohtak ...	19	1	731	1	...	...	23	8	...	...
3	Gurgaon ...	24	1	1,367	2	17	8	70	16	3	...
4	Karnal ...	25	8	1,382	31	14	33	79	23	5	...
5	Ambala ...	19	12	1,715	89	96	155	513	477	114	7
6	Simla ...	3	...	23	...	...	...	...	...	...	...
	JULLUNDUR DIVISION.										
7	Kangra ...	15	1	713	1	...	...	...	...	...	...
8	Hoshiarpur ...	23	1	2,108	6	10	1	2	2	1	...
9	Jullundur ...	17	2	1,215	3	5	...	5	35	14	...
10	Ludhiana ...	14	3	858	5	...	...	...	13	3	...
11	Ferozepore ...	24	2	1,500	4	1	...	8	...	...	...
	LAHORE DIVISION.										
12	Lahore ...	28	5	1,194	7	...	2	10	21	19	1
13	Amritsar ...	15	4	1,039	5	...	...	4	36	11	...
14	Gurdaspur ...	22	12	2,238	31	42	37	39	51	5	2
15	Sialkot ...	30	11	2,349	23	...	3	21	51	10	...
16	Gujranwala ...	30	4	1,736	10	...	5	1	32	17	...
	RAWALPINDI DIVISION.										
17	Gujrat ...	15	4	1,326	1	...	...	1	...	...	1
18	Shahpur ...	23	1	1,054	1	...	...	...	...	2	...
19	Jhelum ...	14	5	898	5	...	...	...	...	...	...
20	Rawalpindi ...	14	11	1,177	37	7	1	4	6	28	7
21	Attock ...	13	2	628	2	...	...	...	...	...	...
22	Mianwali ...	15	...	396	...	...	...	...	...	...	...
	MULTAN DIVISION.										
23	Montgomery ...	21	1	1,348	2	5	9	1	4	...	...
24	Lyallpur ...	20	2	1,277	2	...	...	...	...	5	1
25	Jhang ...	13	2	955	3	...	...	20	2	...	...
26	Multan ...	20	...	1,353	...	...	...	...	...	...	...
27	Muzaffargarh ...	23	...	860	...	...	...	...	...	...	...
28	Dera Ghazi Khan ...	23	...	707	...	...	...	...	...	...	...
	Total for the Province ...	549	99	33,110	282	230	333	852	864	260	20



## No. XII.

## DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1916.

THS.						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	Number.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
...	...	1	...	...	...	170	165	335	0.39	0.45	0.42	2.37	1
...	...	...	...	...	...	14	17	31	0.04	0.05	0.04	5.77	2
...	...	...	...	...	...	26	28	54	0.07	0.08	0.07	7.46	3
...	...	...	...	...	10	79	85	164	0.18	0.23	0.21	6.38	4
...	...	...	...	4	34	688	712	1,400	1.92	2.59	2.21	6.53	5
...	...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	1	...	1	1	...	0.002	0.001	0.71	7
...	...	...	...	...	...	5	11	16	0.01	0.03	0.02	7.69	8
...	...	...	...	...	...	18	41	59	0.04	0.12	0.07	8.96	9
...	...	...	1	...	21	17	21	38	0.06	0.09	0.07	6.91	10
...	...	...	...	...	...	5	4	9	0.01	0.01	0.01	3.06	11
...	...	...	...	...	1	31	23	54	0.05	0.05	0.05	2.42	12
...	...	...	...	2	3	24	32	56	0.04	0.08	0.06	8.64	13
...	2	...	...	2	16	112	84	196	0.24	0.23	0.24	9.71	14
...	...	...	1	...	...	44	42	86	0.08	0.10	0.09	9.51	15
...	...	...	2	2	...	32	27	59	0.06	0.07	0.06	10.45	16
...	...	...	2	...	...	3	1	4	0.01	0.002	0.01	8.96	17
...	...	...	...	...	...	2	...	2	0.01	...	0.002	4.65	18
...	...	2	2	3	...	6	1	7	0.02	0.004	0.01	7.01	19
2	8	120	262	190	23	335	323	658	1.25	1.35	1.30	6.73	20
...	...	2	...	...	...	2	...	2	0.01	...	0.004	3.58	21
...	...	...	...	...	...	...	...	...	...	...	...	0.001	22
...	...	...	...	...	...	8	11	19	0.03	0.05	0.04	0.66	23
...	...	...	...	...	...	5	1	6	0.01	0.002	0.01	2.59	24
...	...	...	...	...	...	13	9	22	0.05	0.04	0.04	1.72	25
...	...	...	...	...	...	...	...	...	...	...	...	0.07	26
...	...	...	...	...	...	...	...	...	...	...	...	0.04	27
...	...	...	...	...	...	...	...	...	...	...	...	...	28
2	10	125	270	203	109	1,639	1,639	3,278	0.15	0.19	0.17	5.22	



STATEMENT

MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

Serial No.	Districts and Native States.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Hissar ...	43	33	160	79	178	111	151	87	40	23	...	1
2	Rohtak ...	...	...	...	...	24	28	12	8	...	...	...	...
3	Gurgaon ...	17	17	8	8	11	10	16	16	3	3	...	...
4	Karnal ...	14	14	33	33	79	79	23	23	7	5	...	...
5	Ambala ...	101	96	210	157	571	518	503	481	125	114	7	7
6	Simla ...	...	...	...	...	...	...	...	...	...	...	...	...
7	Kangra ...	...	...	...	...	...	...	...	...	...	...	...	...
8	Hoshiarpur ...	10	10	1	1	2	2	2	2	1	1	...	...
9	Jullundur ...	20	5	4	...	15	5	60	35	15	14	...	...
10	Ludhiana ...	...	...	6	...	3	...	27	13	5	3	...	...
11	Perozepore ...	5	1	...	...	...	8	5	...	...	...	...	...
12	Lahore ...	...	...	3	2	15	10	30	21	35	19	1	1
13	Amritsar ...	1	...	...	...	10	4	48	36	17	11	...	...
14	Gurdaspur ...	42	42	37	37	50	39	61	51	9	5	2	2
15	Sialkot ...	...	...	9	3	33	21	48	51	13	10	...	...
16	Gujranwala ...	...	...	2	5	11	1	33	32	10	17	...	...
17	Gujrat ...	...	...	1	...	...	1	...	...	1	...	...	1
18	Shahpur ...	...	...	...	...	...	...	...	...	2	2	1	...
19	Jhelum ...	...	...	...	...	...	...	...	...	...	...	...	...
20	Rawalpindi ...	12	7	3	2	7	4	16	6	53	35	16	15
21	Attock ...	...	...	...	...	...	...	...	...	...	...	...	...
22	Mianwali ...	...	...	...	...	...	...	...	...	...	...	...	...
23	Mantgomery ...	7	5	13	9	1	1	4	4	...	...	...	...
24	Lyalpur ...	...	...	...	...	1	...	1	...	7	5	...	1
25	Jhang ...	1	...	...	...	20	20	2	2	...	...	...	...
26	Multan ...	...	...	...	...	...	...	...	...	...	...	...	...
27	Muzaffargarh ...	...	...	...	...	...	...	...	...	...	...	...	...
28	Dera Ghazi Khan ...	...	...	...	...	...	...	...	...	...	...	...	...
Total British Districts		273	230	490	336	1,031	857	1,047	868	343	267	27	28
1	Patiala ...	55	55	111	111	159	159	235	225	8	8	35	35
2	Kapurthala ...	...	...	...	...	...	...	19	8	...	...	...	...
3	Malerkotla ...	...	...	...	...	...	...	...	...	...	...	...	...
4	Jind ...	24	17	30	14	60	37	56	29	23	16	...	...
5	Kalsia ...	23	11	40	16	54	27	64	32	...	...	...	...
6	Faridkot ...	...	...	...	...	...	...	...	...	...	...	...	...
7	Nabha ...	...	...	...	...	...	...	...	...	...	...	...	...
8	Pataudi ...	...	...	...	...	...	...	...	...	...	...	...	...
9	Bahawalpur ...	...	...	...	...	...	...	6	4	1	...	...	...
10	Nalagarh ...	...	...	...	...	...	...	...	...	...	...	...	...
11	Bilaspur ...	...	...	...	...	...	...	...	...	...	...	...	...
Total Native States...		102	83	181	141	273	223	380	308	32	24	35	35
GRAND TOTAL ...		375	313	671	477	1,304	1,080	1,427	1,176	375	291	62	63

N. R.—The total deaths during the year in Ambala and



No. I.

## DISTRICTS AND NATIVE STATES IN THE PUNJAB DURING THE YEAR 1916.

JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		Serial No.	REMARKS.
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
...	...	...	...	1	1	...	...	...	...	...	...	573	335	1	
...	...	...	...	...	...	...	...	...	...	...	...	36	31	2	
...	...	...	...	...	...	...	...	...	...	...	...	55	54	3	
...	...	...	...	...	...	...	...	...	...	10	10	166	164	4	
...	...	...	...	...	...	...	...	4	4	49	35	1,570	1,412	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
...	...	...	...	...	...	...	...	...	...	1	1	1	1	7	
...	...	...	...	...	...	...	...	...	...	...	...	16	16	8	
...	...	...	...	...	...	...	...	1	...	...	...	115	59	9	
...	...	...	...	...	...	1	1	7	...	45	21	94	38	10	
...	...	...	...	...	...	...	...	...	...	...	...	10	9	11	
...	...	...	...	...	...	...	...	...	...	5	1	89	54	12	
...	...	...	...	...	...	...	...	3	2	3	3	82	56	13	
...	...	3	2	...	...	...	...	2	2	21	16	227	196	14	
...	...	...	...	...	...	1	1	...	...	...	...	104	86	15	
...	...	...	...	1	...	1	2	2	2	7	...	72	59	16	
...	...	...	...	3	...	1	2	2	...	...	...	8	4	17	
...	...	...	...	...	...	...	...	...	...	...	...	3	2	18	
...	...	...	...	3	2	3	2	5	3	1	...	12	7	19	
2	2	13	9	182	123	345	265	262	200	34	25	945	693	20	
...	...	...	...	3	2	1	...	3	...	...	...	7	2	21	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	
...	...	...	...	...	...	...	...	...	...	...	...	25	19	23	
...	...	...	...	...	...	...	...	...	...	...	...	9	6	24	
...	...	...	...	...	...	...	...	...	...	...	...	23	22	25	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	26	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	27	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	
2	2	16	11	193	128	353	273	291	213	176	112	4,242	3,325		
...	...	...	...	...	...	...	...	...	...	1	1	604	604	1	
...	...	...	...	...	...	...	...	...	...	...	...	19	8	2	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	
...	...	...	...	...	...	...	...	...	...	26	11	219	124	4	
...	...	...	...	...	...	...	...	...	...	...	...	181	86	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	
...	...	...	...	...	...	...	...	...	...	...	...	7	4	9	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	
...	...	...	...	...	...	...	...	...	...	27	12	1,030	826		
2	2	16	11	193	128	353	273	291	213	203	124	5 272	4,151		

Rawalpindi include 12 and 35 deaths, respectively, in Cantonments.



